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To examine the rationale for education in agriculture prior to 1917, a study was conducted with major objectives of tracing philosophical concepts of education for agriculture, documenting evolution of instructional programs with implications for occupational training at secondary levels, evaluating educational philosophies and occupational needs leading to enactment of federally supported legislation, and developing a reference bibliography. Data were compiled by locating and reviewing historical materials, communicating with individuals in positions to supply historical information, preparing a supplementary reference bibliography, and developing a chronology of activities and events pertaining to the development of vocational education in agriculture. Findings discuss: (1) early movements for agricultural education in the United States, (2) legislation for education in agriculture starting with the Land Grant Act of 1862, (3) early instruction programs in agriculture in elementary and secondary public schools, (4) establishment of county, regional and state agricultural schools, and (5) development of federally-aided programs of secondary education in agriculture. A 144-item bibliography and a chronological historical listing are appended. (DM)

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FINAL REPORT

Project No. 8-F-020
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HISTORICAL DEVELOPMENT OF AGRICULTURAL EDUCATION IN THE UNITED STATES PRIOR TO 1917. Final Report.

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April, 1969

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PREFACE

A History of Agricultural Education of Less Than College Grade in the United States was compiled by R. M. Stimson and F. W. Lathrop in 1940. Basically it is a summary by States of the federally-aided program resulting from the legislation of 1917.

A suggestion for updating the Stimson-Lathrop study came from the Division of Vocational and Technical Education in the U. S. Office of Education. It appeared, however, that this should be preceded by a documentation of historical developments leading to the enactment of legislation in support of vocational education in agriculture.

Broadly conceived, the evolution of agricultural education in the United States began with problems encountered in the production of food stuffs by early settlers. To highlight developments in education and agriculture, having implications for vocational education in agriculture over a time span of approximately 300 years, would be impossible. Hence, the major concern was that of establishing delimitations without destroying completely the intent of the study.

Many persons and several agencies provided valuable assistance to the planning and development of the accompanying manuscript. Gordon Swanson at the University of Minnesota and the late H. M. Hamlin at North Carolina State University provided advisement throughout the study. Histories of agricultural education were made available for several states. Personnel of state staffs provided information during regional and national meetings. Visits were made to check directly on historical materials and developments in several states, including Alabama, Arkansas, Colorado, Georgia, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota, Nebraska, New York, North Carolina, Oklahoma, South Carolina, Texas, and Virginia. Interviews were conducted with several retired persons who had experience with early programs of vocational education in agriculture, namely: R. E. Cammack, Alabama; R. W. Roberts, Arkansas; G. A. Schmidt, Colorado; Barton Morgan and J. B. McClelland, Iowa; Carsie Hammonds, Kentucky; H. M. Hamlin, North Carolina; Don Orr, Oklahoma; W. G. Crandall, J. B. Monroe, and B. H. Stribbling, South Carolina; E. R. Alexander and Henry

Ross, Texas; Walter Newman and Harry Sanders, Virginia. D. W. Parson, West Virginia; W. T. Spanton and E. J. Johnson, Washington, D. C. Contacts were made through correspondence with a substantial number of additional persons. Information relative to early legislation for vocational education was made available by the American Vocational Association.

The Department of Education, University of Missouri, Columbia, cooperated with the Bureau of Research, U. S. Office of Education in sponsoring the study. The application and other details were processed through the Region VI, Kansas City, branch of the U. S. Office of Education. Library facilities and office assistance for the study were provided by the University.

G.F. Ekstrom

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SUMMARY OF REPORT

There is considerable domumentation pertaining to the early background of agriculture in America. Much information is available regarding institutional developments in the United States starting with the Land Grand College Act in 1862. Information is quite limited, however, as to the rationale for education in agriculture during formative periods prior to and following passage of the Act.

A History of Agricultural Education of Less than College Grade was compiled by R. W. Stimson and F. W. Lathrop in 1942. Basically it is a summary by States of federally-aided programs of vocational education in agriculture beginning in 1917.

Major focus in the present study was concerned with the background of the program. The stated objectives were:

1. To trace philosophical concepts of education for agriculture in the United States prior to 1917.

2. To document evolution of instructional programs in agricultural education which had implications for occupational training at secondary education levels.

3. To evaluate educational philosophies and occupational needs which led to the enactment of federally supported legislation for vocational education.

4. To develop a reference bibliography pertaining to the early history of agricultural education in the United States.

Procedures used in compiling data pertaining to the historical developments were essentially as follows:

1. Historical materials were located and reviewed.

2. Communications were established by correspondence and direct contacts with individuals in position to supply historical information.

3. A supplementary reference bibliography, pertaining to the early history of agricultural education in the United States was prepared.

4. A chronology was organized of activities and events pertaining to the development of vocational education in agriculture in the United States.

The data involve activities and events as noted herewith:

1. Early movements for agricultural education in the United States.
2. Legislation for education in agriculture starting with the Land Grant Act of 1862.
3. Early instruction programs in agriculture in elementary and secondary public schools.
4. Establishment of county, regional and state agricultural schools.
5. Development of federally-aided programs of secondary education in agriculture.

Findings of the study are organized by chronological periods.

1. The Colonial Period
2. Colonial Period to Civil War
3. Civil War to 1900
4. Nineteen hundred to 1917.

Colonial Period

The Colonial period covered almost two centuries, and its influence lasted much longer. It strongly stamped American habits and institutions. Englishmen predominated in the colonies. They come mostly from a rural background where agriculture was not highly developed.

The distinguishing feature of farm life in the pioneer period was its economic self-sufficiency. There were no markets for farm products, consequently no goods could be purchased from outside.

From the settlement of Jamestown (1607) to the close of the Colonial period (1783), no system of free public education existed in any of the states prior to 1789. Parents of means sent their children to private schools, usually controlled by the prevailing religious denomination. Under the Poor Law of the colony parents having no means were required to indenture their children to an employer, so that they might learn a craft, or send them to a pauper or charity school.

The beginnings of apprenticeship training in America resembled that of the mother countries. The English apprenticeship system was modified to suit conditions in the New World, and apprenticeships in Colonial America became the most important educational agency of the period of colonization and settlement.

Vocational education in agriculture in some form, has always been a part of American life. The first colonists were taught by friendly Indians to raise corn and other crops. Trades were taught through formal apprenticeships. Fathers were held responsible for teaching their sons to farm.

Colonial Period to Civil War

Various agricultural institutions existed in the United States prior to the founding of the agricultural colleges and the development of public secondary schools in which formal education in agriculture was presented. Agricultural societies and organizations exerted a strong influence in the field of agriculture during the forepart of the nineteenth century.

As early as 1743 Benjamin Franklin led in the organization of the American Philosophical Society, which gave much attention to agriculture and published articles pertaining to farming. Interest of the members in agriculture led to the organization in 1785 of the Philadelphia Society for the

Promotion of Agriculture.

The South Carolina Society for Promoting and Improving Agriculture and Other Rural Concerns was organized in Charleston, in 1785, and ten years later was incorporated as the Agricultural Society of South Carolina. Following the example of South Carolina, state organizations became the pattern in several states. The movement came to a head in 1852 with the establishment of the United States Agricultural Society with headquarters in Washington.

The Lyceum Movement was the first phase of an organized drive for education for farmers and working class people. The movement had its origin in Millbury, Massachusetts in 1826.

Between 1819 and 1830 Manual Labor Schools were organized in Connecticut and a number of other states. The plan was popular for a few decades, especially in theological institutions.

A number of technical schools were established early in the century, including the Rensselaer School at Troy, New York. It was the first institution to offer a curriculum in agriculture leading to a degree. The first school devoted exclusively to agriculture was established in 1821 at the Gardiner Lyceum in Maine. Its founder was Robert Gardiner, who though not himself a practical farmer, took a deep interest in promoting agriculture.

The precedent of land grants for the support of education came on May 20, 1785, when the Continental Congress inserted in the Northwest Ordinance the provision that "there shall be reserved the lot No. 16, of each township, for the maintenance of public schools within the said township."

The Ordinance of July 13, 1787, for the government of the Northwest Territory contained the declaration that "religion, morality, and knowledge being necessary to good government and happiness of mankind, schools and the means of education shall forever be encouraged."

Civil War to 1900

Chronologically, the background of public school education in agriculture paralleled that of the land grant movement. A number of agricultural schools and colleges were established from 1850 to 1860, most of which disappeared by the time of the passage of the Morrill Act of 1862. The Agricultural College of the State of Michigan created by legislative enactment in 1855 was the first state college of agriculture to be established in the nation.

The principle of federal support for education became firmly established with passage of the Morrill Act of 1862. The law provided a grant of land to each state on the basis of 30,000 acres for each member of Congress. Iowa became the first state in 1862 to accept provisions of the Act.

The need for experimental work in agriculture became apparent as instructional programs were developed under terms of the Land-Grant Act. In view of this, experiment stations were established in a number of states prior to passage of the Hatch Experiment Station Act of 1887. The latter act was an important piece of legislation as related to vocational education in that it provided the means for conducting research upon which subject matter in agriculture might be based.

The Second Morrill Act was passed by Congress in 1890. The Nelson Amendment to the Act, passed in 1908, carried an additional provision whereby--"colleges may use a portion of this money for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts". The Morrill Acts and the Nelson Amendment provided funds for resident teaching only. Funds for research and extension were first provided in the Hatch Act of 1887 and the Smith-Lever Act of 1914.

Three colleges attended predominately by Negroes qualified as land grant institutions prior to enactment of the 1890 amendment to the Morrill Act. The pioneer institution was Alcorn University established in 1871 in Mississippi. The other endowments were to Claflin University in South Carolina, and to Hampton Institute in Virginia. Following 1890, private or state institutions were designated as Negro

Land Grant Colleges in the remaining Southern states.

The United States Department of Agriculture established by the act of Congress and signed by President Lincoln on May 15, 1862, was an outgrowth of the agricultural division of the Patent Office which had been in operation since 1839. Before the Department was established there was agitation to give it cabinet status, which the Congress approved in 1899. James Wilson of Iowa was appointed Secretary of Agriculture in 1897 and was the first secretary to serve as a member of the Cabinet. He set up the guidelines for the Department as it is now known.

The first agricultural organization to reach a substantial number of farmers was the Patrons of Animal Husbandry, better known as the Grange, which came into existence in 1867. Among the organizations which followed the Grange was the Farmers Alliance. It emphasized social and political activities, and to a certain extent, cooperative enterprises. A prominent objective of the organizations was educational.

Other than the land-grant movement, a number of educational developments occurred during the latter part of the nineteenth century, which contributed to the background of vocational education in agriculture.

The American Lyceum movement which was quite prominent during the forepart of the century declined after the Civil War and was superseded by the Chautauqua System founded in New York in 1874. The Lyceums and Chautauquas provided the background for the program of General Extension which was first introduced through city libraries. From 1890 to 1900 the Universities of Chicago and Wisconsin and over twenty other institutions organized departments of University Extension.

The rural people who supported the establishment of agricultural colleges were not satisfied to have the institutions confine their efforts to resident teaching and experimental work. Eventually this lead to the establishment of extension services in the several states, followed by passage of the Smith-Lever Act of the Federal Government in 1914.

During formative years problems were encountered by colleges of agriculture in securing enrollments and in developing curricula leading to degrees. The situation gave encouragement to the offering of credit and non-credit short courses, in which Wisconsin pioneered. Short courses were thereafter established in a number of land grant colleges.

A school of agriculture of the apprenticeship type was authorized by the Minnesota Board of Regents in 1886. The school which became operative in 1888 at St. Anthony on the new university farm was the first of its kind to be established in the United States. Similar schools were established during the next twenty five years in a number of states.

The years following the Civil War constituted a period of unprecedented growth. Over the last three decades of the century the country doubled in population. Perhaps the most notable development during the period was the establishment of public education in the South.

Compulsory attendance in elementary schools was first required in Massachusetts in 1852. In 1870, 57 per cent of children 7 to 17 years of age were enrolled in public schools: in 1900, 72.4 per cent were enrolled.

The early pattern of secondary education was not terminal but rather served in a feeder capacity for graduates of grammar schools who chose to enter college. The schools were not necessarily four-year institutions, but "steps in a ladder between the elementary school and higher education". Consequently, most of the students who attended high school were college bound.

Later in the century, the role of the secondary school changed considerably. Beginning in 1880 the Census revealed that more and more young people entered and graduated from high school. Simultaneously, the per cent who entered college declined.

Nineteen Hundred to 1917

From the standpoint of agriculture the beginning of the present century may be characterized as a period of expansion and development. The Farmers Cooperative Union was organized in 1902 and the first Farm Bureau was established at Brome, New York, in 1906. Legislation for cooperatives was enacted in 1914.

The acceptance and expansion of public high schools during the corresponding period, was a major development in education. Simultaneously, the teaching of agriculture in elementary schools expanded materially, only to decrease somewhat as the subject appeared in offerings of secondary schools. The advent of mass education in the United States became conspicuous about 1900. By 1918 all states had compulsory attendance laws. The university which existed in name only in 1880 became a reality during the forepart of the century.

The subject of agriculture as introduced in elementary schools of the United States went through a transition of nature study, followed by school gardens. The initiative for promoting nature study is credited to workers in several states. In 1901 Hampton Institute in Virginia began the publication and distribution through the Southern states of nature study leaflets for teachers. The first of a series of similar leaflets was published at Cornell University in 1896. In 1905 there were 486 junior naturalists clubs in New York with a membership of 14,318 children.

Considerable initiative for promoting the school garden concept in the South is attributed to the Whittier Laboratory School at Hampton Institute in Virginia, where plots of ground were made available for the use of children. By 1906 the United States Department of Agriculture estimated that there were about 75,000 school gardens in the United States.

Several national agencies gave support to the development of instructional programs in agriculture in secondary schools. The Office of Experiment Stations in 1902 began to publish a section on the progress of secondary education in agriculture in its annual report. The association of Land Grant Colleges and Universities devoted discussions to agricultural education for secondary schools at annual meetings. Special consideration was given to the professional preparation of teachers. The Bureau of Education in the Department of the Interior had specialists in rural or agricultural education for a number of years.

Instruction in agriculture in secondary schools from 1900 to 1917 was projected through regular high schools and through special schools. The latter included: county schools of agriculture, congressional district schools, judicial district schools, and state schools of agriculture, some of which were known as Farm Life Schools. A number of private schools also included offerings in agriculture. There were some special schools for Negroes, Indians, and a few for delinquents.

The organization of clubs as teaching devices in elementary schools became conspicuous as related to laboratory work in the teaching of gardening. Club work was associated also with home projects in teaching production aspects of crop and livestock enterprises in early offerings of agriculture in elementary and secondary schools. In 1908 clubs began to be organized in connection with the Farmers Cooperative Demonstration Work in Southern states. In 1909, more than 10,000 boys participated in corn clubs and in 1910, over 46,000 boys were connected with the clubs.

With the expansion of agricultural offerings in elementary and secondary schools, the training of teachers became a major problem. At best the early training program for teachers was quite inadequate. Graduates from agricultural colleges received but little if any training in professional courses, whereas persons enrolled in normal schools received little if any training in technical agriculture.

The Nelson Amendment of 1907 to the Morrill Act of 1862 gave land grant colleges permission to use a portion of the appropriated funds for the training of teachers of agriculture and mechanic arts. It is obvious that institutions in only a few of the states took advantage of the Nelson Act, and that the lack of implementation contributed to passage of the Smith-Hughes Act in 1917.

The background for agricultural extension work and for the teaching of agriculture are somewhat compatible. A. C. True credits the beginning of extension work to activities of early agricultural societies from the time the Philadelphia Society was organized in 1785.

The agitation for federal support for extension work and vocational instruction in agriculture gained momentum shortly after 1900. Following the election of 1912, Senator Hoke Smith of Georgia became chairman of the Committee on Education and Labor. In the House, Representative Lever of South Carolina was chairman of the Committee on Agriculture.

The Lever extension bill was passed by the House on January 19, 1914. It was later substituted for the Smith bill and approved by the Senate on February 7, 1914. After a conference report on House and Senate amendments was approved by the two branches, the bill was signed by President Wilson May 8, 1914.

Support for federal legislation for vocational education gained momentum with enactment of the Smith-Lever Act and appointment of a Commission on National Aid to Vocational Education in 1914.

The question of national grants to the States occupied the largest part of the time and attention of the Commission. The final report of the Commission consisted of two volumes. The first volume included a summary of findings and recommendations. The second volume included transcriptions of hearings before the Commission with Federal departments, and with individuals and national organizations.

The report of the Commission on National Aid to Vocational Education was printed and widely circulated, but it was thought best not to press for passage of the proposed legislation at the short session of the Sixty-third Congress beginning in December 1914. The vocational bill was introduced in the Senate by Hoke Smith, December 7, and in the House by Representative D. M. Hughes, December 19, 1915. The bill passed the Senate unanimously on July 16, 1916. In the House the bill was held over until the short session.

President Wilson was strong in his support of federal legislation for vocational education. In his annual address to Congress on December 15, 1915, he stressed the preparedness program and the need for industrial, vocational and agricultural training, and that the industries and resources of the country should be made available for mobilization.

Support for the new legislation had crystalized throughout the country prior to issuance of the mandate by President Wilson. Strong support for implementing the 1914 recommendations of the National Commission were forthcoming from national organizations, including the National Society for the Promotion of Industrial Education, the National Education Association, the American Federation of Labor, and the United States Chamber of Commerce.

The vocational bill passed the House January 9, 1917. After differences between the Senate and House bills were resolved, final legislative action was completed February 17. The bill became law with approval by President Wilson February 23, 1917.

CHAPTER I

INTRODUCTION AND PROCEDURES

Statement of Problem

The history of training for agriculture in the United States is confined largely to chronology involving participation of public and private institutions. Events leading up to enactment of the Morrill Land Grant Act of 1862 are a matter of record as are subsequent movements involving training in agriculture at collegiate and secondary education levels.

Rationale as to historical needs for agricultural education in the United States is lacking. Most of the background has been drawn from secondary sources. It is proposed that a publication be prepared setting forth the development of agricultural education through various stages, starting with the needs of American immigrants and including the involvement thereafter of agencies and institutions. The major intent would be to document early historical needs in agriculture and the role of education in meeting the needs.

Need for the Study

The need for additional facts pertaining to historical developments of agricultural education in the United States is twofold. First, there is lack of documentation relating to evolved concepts which paralleled agrarian developments. This should be made a matter of historical record. Second, the documentation should serve as a point of departure for research and study pertaining to federally aided programs of agricultural education in the United States, beginning with the Vocational Education Act of 1917. Data contained in the report would be useful in teacher education courses dealing with the history and philosophy of vocational education.

Objectives

1. To trace philosophical concepts of education for agriculture in the United States prior to 1917.

2. To document evolution of instructional programs in agricultural education which had implications for occupational training at secondary education levels.

3. To evaluate educational philosophies and occupational needs which led to the enactment of federally supported legislation for vocation education.

4. To develop a reference bibliography pertaining to the early history of agricultural education in the United States.

Background Data

There is considerable documentation pertaining to the early background of agriculture in America. Contributions included in the bibliography of this report are cited as examples.

Lyman Carrier, The Beginning of Agriculture in America. McGraw Hill Book Company, Inc., 1923

W. D. Rasmussen, Readings in The History of American Agriculture. University of Illinois Press, 1960

U. S. Department of Agriculture. After a Hundred Years. Yearbook of Agriculture, 1962.

The Cyclopedia of Agriculture by L. H. Bailey is recognized as a most detailed history of agriculture, yet Bailey indicated in 1911 that "the history of agriculture was yet to be written".[1]

Much information is available regarding institutional developments in agricultural education in the United States starting with the Land Grant College Act. The data pertain both to enactments of the federal government and to developments within states. Information is quite limited, however, as to the rationale for education in agriculture during formulative periods prior to and following passage of the Morrill Act.

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[1] L. H. Bailey (ed.), Cyclopedia of American Agriculture, IV, Farm and Community, The Macmillan Company, 1911, p. 23.

One of the more complete historical documents is the *History of Agricultural Education in the United States, 1785-1925*, by Alfred C. True.[1]

Reports of two surveys conducted by the U. S. Office of Education between World Wars I and II include some background information pertaining to agricultural education. The first was a Survey of Land Grant Colleges and Universities, Volumes I-II, directed by Arthur J. Klein.[2] Volume II of the report includes a major section on teacher training. A second survey entitled *A History of Agricultural Education of Less Than College Grade in the United States* was compiled by Rufus W. Stimson and Frank W. Lathrop.[3] Basically it is a summary by States of federally-aided programs of vocational education in agriculture.

Definitions

Agricultural Education as used in this study designates an organized program of instruction in agriculture in elementary schools, secondary schools, colleges and universities.

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[1] Alfred C. True, *A History of Agricultural Education in the United States, 1785-1925*, U. S. Department of Agriculture, Miscellaneous Publication No. 36, Government Printing Office, 1928.

[2] *A Survey of Land Grant Colleges and Universities*, U. S. Department of Interior, Office of Education, Bulletin, 1930, No. 9, Government Printing Office, 1930.

[3] R. W. Stimson and F. W. Lathrop, *History of Agricultural Education of Less Than College Grade in the United States*, Federal Security Agency, U. S. Office of Education, Vocational Education Bulletin No. 217, Agriculture Series No. 55, Government Printing Office, 1942.

Vocational Education refers to any form of education, the purpose of which is to fit an individual for useful employment.

The term *Vocation Education in Agriculture* designates an organized instructional program in agriculture below college degree status, provided for persons who have entered upon, or are preparing to enter an agricultural occupation.

The *Morrill Act* refers to the Land Grant College Act signed by President Lincoln, July 2, 1862, granting public land to the States. (12 Stat. L. 503-5 [1862]).

The *Smith-Lever Act* of May 8, 1914, was the National Act providing an annual appropriation to each state for agricultural extension work. (38 Stat. L. 372-5 [1914]).

The *Smith-Hughes Act* of February 23, 1917, was the National Vocational Education Act which provided for cooperation with the states in the promotion of vocational education. (Public Law No. 347, Sixty-fourth Congress-S. 703).

Origins of Vocational Education

The history of vocational education is inseparable from the history of man. The problems of primitive man centered about the task of getting food, seeking shelter and protecting himself from a particular environment. In man's efforts to conquer his physical environment, skill and knowledge to perform specific tasks have been transmitted from generation to generation.

Early forms of vocational education consisted largely of father teaching son, mother teaching daughter and of apprenticeship. In the absence of industrial development, production was for the most part carried on by the family and so was occupational instruction.[1] The education of the early

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[1] U. S. Office of Education, *Education for a Changing World of Work*, Report of the Panel of Consultants on Vocational Education, U. S. Department of Health, Education and Welfare, Government Printing Office, 1963, p. 18.

American Indians was primitive and with little concern for developing the individual, but rather to preserve the tribe.

Education during our colonial period followed a "loose-knitted" plan transferred from Europe and based on the principle that man was responsible for the care and education of his dependents. In the British colonies the apprentice system retained the traditional English characteristics.

The early dame schools and the Latin grammar schools of America were distinctly British. Likewise the early universities were patterned after English institutions. These schools and universities made no contribution to vocational education.

Economic developments accompanied by a decline of apprenticeships during the 19th century, created the need for occupational training. The need was met in part by institutions including, lyceums, manual-labor schools, technical institutes and private trade schools. These efforts contributed to the organization of vocational programs in public schools as industrial developments characterized the forepart of the 20th century.[1]

Scope and Limitations

Due to time and budget limitations, the investigation is confined to the development of agricultural education in the United States. It is recognized, however, that the movement for agricultural schools and colleges was associated with the growth of the natural sciences and their applications in Europe.[2] Of particular educational import for the American Colonies was the English apprenticeship system, which with modifications to suit conditions in the New World, "became the most important educational agency during the period of colonization and settlement".[3]

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[1] Ibid., p. 19-20.

[2] True, op. cit., p. 3.

[3] Roy W. Roberts, Vocational and Practical Arts Education, Harper and Row Publishers, 1965, p. 52.

Major focus of the study is concerned with the background of secondary education in agriculture. Reference to higher education is from the context of technical and leadership training for secondary education. Elementary education is treated as a part of the total training and occupational experience in agriculture.

A number of problems were encountered in obtaining data for the study. (1) Records pertaining to educational developments in agriculture during the formative and expansion periods of our national life are limited. (2) Prior to federal support instructional programs in agriculture were quite diversified and somewhat overlapping, making for difficulty in consolidating data. (3) Some records pertaining to activities and events as reported in the literature are conflicting and lack validity. (4) The scope of the project, even with delimitations, was beyond that for which reasonable accomplishments could be realized within terms of a small-grant contract.

Procedures

Procedures used in compiling data pertaining to the historical development of agricultural education were essentially as follows.

1. Historical materials were located and reviewed.
    a. Books
    b. Publications issued by the U. S. Department of Agriculture, and the U. S. Bureau of Education
    c. State histories of agricultural education
    d. Commission reports
    e. Legislative enactments.
2. Communications were established by correspondence and direct contacts with individuals in position to supply historical information.

   a. In the U. S. Office of Education
   b. In state departments of education
   c. At state universities
   d. At regional and national conferences
   e. With retired administrators and teacher educators.

3. A supplementary reference bibliography pertaining to the early history of agricultural education in the United States was prepared.

4. A chronology was organized of activities and events pertaining to the development of vocational education in agriculture in the United States.

Types of Data

The data compiled from the review of historical materials, supplemented by information obtained through contacts, feature activities and events lending background to vocational education in agriculture. A major breakdown would include:

1. Early movements for agricultural education in the United States
2. Legislation for education in agriculture starting with the Land Grant Act of 1862
3. Early instruction programs in agriculture in elementary and secondary public schools
4. Establishment of county, regional and state agricultural schools
5. Development of federally-aided programs of secondary education in agriculture.

Organization of Data

The historical sketch of American agriculture in Bailey's Cyclopedia implies that the agricultural history of the United States divides itself naturally in five major periods.[1]

1. Coextensive with colonial period, 1607-1783
2. Western expansion, 1783-1830
3. Transformation of the agricultural industry, 1830-1860
4. Expansion of agricultural enterprise, 1860-1887
5. Reorganization of American agriculture, 1867 to date of publication, 1911.

Rasmussen uses four historical periods in presenting historical developments prior to 1914.[2]

1. Beginnings of American agriculture, 1607-1775
2. Agriculture during the confederation, 1776-1789
3. Gradual improvements in American agriculture, 1789-1861
4. The first agricultural revolution, 1861-1914.

The section of the 1940 Yearbook of Agriculture entitled "American Agriculture--The First 300 Years" is organized in three parts.

1. Colonial period
2. Agriculture in transition, 1775-1869

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[1] L. H. Bailey, op. cit., p. 39-70.

[2] Wayne David Rasmussen, Readings in the History of American Agriculture, University of Illinois, 1860.

3. Agricultural revolution in the United States.

The background of agricultural education is somewhat parallel to agricultural developments in the United States, particularly during the 17th and 18th centuries and the forepart of the 19th century when the population was predominately rural. It seemed logical, therefore, to organize the data for this manuscript by chronological periods.

1. The Colonial Period

2. Colonial Period to Civil War

3. Civil War to 1900

4. Nineteen hundred to 1917.

The foremat consists of three major parts: I Summary and Introduction; II Findings; III Conclusions and Implications. Each part contains one or more chapters.

A chronology of educational events is included among appendices to the report.

CHAPTER II
DEVELOPMENTS COLONIAL PERIOD

The colonial period covered almost two centuries, and its influence lasted much longer. It strongly stamped American habits and institutions. Englishmen predominated in the colonies. They came mostly from a rural background where agriculture was not highly developed.

Part I of the 1940 Yearbook of Agriculture is entitled "American Agriculture - The First 300 Years." In it the author traces the conditions that affected most farmers.

> Two characteristics of this period were especially notable. (1) The colonies were predominately agricultural, and the attitudes of the small farmer characterized the people as a whole. (2) Life was fluid because it was continually beginning over again on the frontier. Frontier isolation tended to make people narrow, but primitive conditions made them resourceful, self-reliant, practical, hard-working...
>
> Their farming methods were not suited to the wilderness, and at first they almost starved in spite of an abundance of wilderness food. Not until they had learned new ways from the Indians did they make a success of the new life...
>
> At first the colonists grew their crops in the clearings they found; then they began making clearings, using the Indian method of girdling and burning the trees. Indian corn became the major crop because of its many advantages, but the European grains were also grown - wheat, rye, barley, oats, buckwheat, peas. Livestock was scarce; all animals had to be imported, and none but the better-financed settlements could afford an adequate supply...[1]

" "The American Indians had been practicing agriculture for several centuries before the first European settlers arrived in the new world. It was not until the settler adopted the Indians agricultural plants, cultivation and harvesting methods, and processes of food preparation that they were assured of adequate food supplies."[1]

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[1] Everett E. Edwards, "American Agriculture - The First 300 Years," p. 10-11, 1940 Yearbook of Agriculture.

"The distinguishing feature of farm life in the pioneer period was its economic self-sufficiency. There could be no markets for farm products; consequently; no goods could be purchased from outside."[2]

The 1958-1959 yearbook of the Department of Rural Education, National Education Association makes reference to the educational patterns of the European culture which served as the basis of educational patterns developed in the colonies.

> The educational patterns of Colonial America were closely related to those of European culture. The class and economic differences separating people in Europe separated them also in the colonies. These differences were reflected in education. But perhaps the most influential forces helping to shape educational programs in early America were those stemming from the Reformation.
>
> According to Protestant doctrine, every individual needed personal knowledge of the Bible if he were to be saved, for the Bible was the ultimate religious authority. It was considered necessary that each person be able to read. Moreover, the Reformers were convinced that society must be made to conform to religious precepts. To achieve this, religious education was needed. The unifying purpose of education was that of training for Christian citizenship. Since all men were not only eligible but were, in fact, desperately in need of such training, education of the masses became a matter of serious concern. 'Nor was there doubt how this training was to be accomplished. The student's logical powers were to be formed by mathematics, his taste by the Greek and Latin classics, his speech by

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[1] Rasmussen, _op_. _cit_., p. 12.

[2] Louis Barnhard Schmidt, "The Agricultural Revolution in the Prairies and the Great Plains of the United States," _Agricultural History_, 8:169-195, October, 1934.

> rhetoric, and his ideals by Christian ethics.' This training, common in the Latin grammar school of the seventeenth and early eighteenth centuries, represented a curious mixture of traditions that had evolved from both the classical Renaissance and the Reformation. It included an introduction to the intellectual forces that gave shape to the Western culture, and at the same time it included those elements of Western heritage that were specifically Christian.[1]

From the settlement of Jamestown (1607) to the close of the Colonial period (1783), no system of free public education existed in any of the colonies, nor did such a system exist in any of the states previous to 1789.

"Parents of means sent their children to private schools usually controlled by the prevailing religious denomination. Under the Poor Law of the colony parents having no means were required to indenture their children to an employer... so that they might learn a craft, or send them to a pauper or charity school."[2]

The beginnings of apprenticeship training in America are described in some detail by Roberts. He points out that this type of training resembled that of the mother countries. "The English apprenticeship system was modified to suit conditions in the New World, and apprenticeships in colonial America became the most important educational agency of the period of colonization and settlement."[3]

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[1] Gordon I. Swanson (ed.), Vocational Education in Rural America, Yearbook 1958-59, Department of Rural Education, National Education Association, p. 7-8. (by permission of publisher)

[2] Layton S. Hawkins, Charles A. Prosser and John C. Wright, Development of Vocational Education, American Technical Society, 1951, p. 6.

[3] Roberts, op. cit., p. 52.

As a background for his publication on vocational and technical education, Grant Venn presents a concise view of education in early America.

> Education in early America was dominated by British thought and practice. The nine colonial colleges, the Latin grammar schools, and the dame schools all reflected English models, with curricula centered on the Greek and Latin classics. Against this aristocracy-oriented education at least two notable voices of dissent are recorded, those of Benjamin Franklin and Thomas Jefferson. Franklin had little taste for 'useless classics,' favoring a more utilitarian approach through which the application of science could raise the level of farming and the trades in the Colonies. Jefferson, although not condemning the value of a literary education, did take recognition of the value of 'scientific' farming and training in the crafts in his 1806 proposal for a program of land-grant support of a national university.
>
> But such suggestions received little approval in the educational community of the new Republic. The tone of education was set by the colleges, small, sectarian, patterned after European models, with curricula preserved from earlier centuries. Theology, philosophy, Latin and Greek, mathematics, and rhetoric were the courses offered, and ministers, schoolmasters, doctors, lawyers, and a few men of business were the clientele. Although strained varieties of economics, literature, history, and science were gradually added to the curriculum during succeeding decades of the nineteenth century, the subject matter was not related to practical application. Libraries were small and little used; basic and applied research were almost unknown, science was in a book and not the laboratory, and graduate study was something the wealthier went to Europe for. The public schools that did exist were cut from the same cloth, and were college preparatory in direction.[1]

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[1] Grant Venn, Man, Education and Work, American Council on Education, 1964, p. 4 1.(by permission of publisher)

Vocational education in agriculture in some form, has always been a part of American life. The first colonists were taught by friendly Indians to raise corn and other crops. Throughout the 168 years before a national government was established, there was of necessity, great stress upon teaching young people to work. Trades were taught through formal apprenticeships. Fathers were held responsible for teaching their sons to farm.[1]

Perhaps the first formalized training in American agriculture was in Georgia. Before sailing for America, James Oglethorpe planned a definite system of agricultural education for the colonists. The plan provided for three things:

1. To make immediate use of the agricultural practices of the Indians who inhabited the coast of Georgia.

2. To establish an experimental farm for trying out new crops and finding effective cultural methods of producing all enterprises to be undertaken by colonists.

3. To provide special instructors and training in agriculture for all of the colonists.[2]

The records show that an experimental garden of ten acres was established at Savannah in 1733. The experimental plots were filled with mulberry trees and plants of many different varieties from many lands.

As early as 1732 the Trustees of the Georgia colony began to select and employ teachers of agriculture for the projected colony. In that year three Piedmontese (Italians)

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[1] H. M. Hamlin, "Fifty Years of Progress in Agricultural Education," American Vocational Journal, 31:39, December, 1956.

[2] John T. Wheeler, Two Hundred Years of Agricultural Education in Georgia, The Interstate Printers and Publishers, 1948, p. 3. (by permission of publisher)

'were engaged to go and settle in Georgia and instruct the people' in the production of raw silk. These men were doubtless the first teachers of agriculture to be employed in this country. Each group of the Georgia teachers had a large plantation on which apprentices were taught methods of cultivation derived from experiences of the Indians, the understanding of the teachers, and findings growing out of the experimental gardens.

The first schools of the New World were similar to the country from which the settlers came. Four types of educational activity were conducted during the early part of the colonial period. These were apprenticeships, religious schools for instruction in reading and writing, Latin grammar schools, and practical schooling in mathematics. The schools of the South were private and the schools of the Middle colonies were parochial for the most part.

In general the English system of schools was adopted in this country by the early colonists from Great Britain. The elementary schools were at first privately maintained by tuition or in part by voluntary contributions. The first school in North America to receive public funds by vote of the town was established in Dorchester, Massachusetts, in 1639. In 1647 the Massachusetts Bay Colony passed a general law requiring that an elementary school should be established in every town of 50 families and a Latin school in every town of 100 families.

Outside of New England support of education with public funds was chiefly confined to higher institutions and the establishment of general systems of public education was long delayed.

An agricultural school for orphans was established at Ebenezer, Georgia, in 1934 or shortly thereafter. The Bethesda school at Savannah began the teaching of agriculture in 1740 with the stated purpose of teaching pupils to work so as to be able to earn their own living from farming.[1]

A concluding statement by Hamlin on the evolution of public education in the colonies is quite explicit.

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[1] Wheeler, op. cit., p. 12. (by permission of publisher).

> The Colonial period left us an educational heritage highly variable in nature, but characterized by a predominance of private education, emphasis on religious values, local control, class segregation, very limited schooling in a very few subjects, authoritarian management, memorizing and drill as the basic methods of learning, domination of secondary schools by colleges, and active citizen participation in public schools. Its influences are still with us.[1]

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[1] Herbert M. Hamlin, The Public and Its Education, Interstate Printers and Publishers, 1955. p. 38. (by permission of publisher).

CHAPTER III
DEVELOPMENTS COLONIAL PERIOD TO CIVIL WAR

Introduction

The Cyclopedia of American Agriculture organizes agrarian developments from the War of Independence to the Civil War into two main periods: (1) 1783-1830, a period of rapid western expansion, and (2) 1830-1860, a period of rapid transformation.[1]

The period from 1783-1830 witnessed beginnings of public land policy, the rise of cotton to a position of predominance in the South, and early beginnings of the application of sciences to agriculture. From 1830-1860, agricultural industry was generally transformed from a self-sufficiency stage to a commercial stage in which products were grown primarily for the market. Epoch-making inventions in farm machinery were brought into use, railway transportation opened up the great interior, agricultural societies were widely organized, and agricultural fairs became established institutions.

Rasmussen traces developments between the colonial period and Civil War in two sections: (1) 1776-1789, agriculture during the Confederation, and (2) 1879-1961, gradual improvements in American agriculture. The former period involved the sale of government and western lands, and the establishment of agricultural societies. Among inventions of the latter period were the cotton gin and the mechanical reaper.[2]

In his contribution to the 1940 Yearbook of Agriculture Edwards refers to the period from 1775 to 1860 as that of Agriculture in Transition. The summary of the yearbook carries the following statement regarding the period.

> The opening of new lands and the westward expansion between 1790 and 1850 was marked by one

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[1] Cyclopedia of American Agriculture, _op_. _cit_., p. 39.

[2] Rasmussen, _op_. _cit_., Parts II, III.

> of the greatest migrations in the history of the world. In 1790 there were 4,000,000 people in the United States, of whom 94 percent were in the 13 original States; within 60 years there were 23,000,000 people and 32 States. 'Land was the great magnet...available almost for the asking...an irresistible temptation.' The first great trek was into the Old Northwest (bounded by the Ohio, the Great Lakes, and the Mississippi) opened up by the Ordinances of 1785 and 1787. Settlers rushed in even before the surveys were completed. The same wave of migration settled western New York. After 1815, the migration increased, stimulated by the depression in Europe and our own Eastern States, the increasingly liberal land policies of the Federal Government, victories over the Indians, the use of steamboats on western rivers, the Louisiana and East Florida purchases.[1]

In developing a background for his book dealing with land-grant colleges, Eddy indicates:

> The American of the early nineteenth century could be characterized as simple and agricultural. The population, 85 percent of which was rural, lived on farms and in small towns along the eastern seaboard. The center of knowledge was the church and the growing academy...life was made secure by a strong agricultural economy, and a strong religious faith.[2]

Early Agricultural Institutions

Various agricultural institutions existed in the United States prior to the founding of the agricultural colleges and the development of public secondary schools in which formal education in agriculture was presented. Agricultural societies and organizations exerted a strong influence in the field of agriculture during the forepart of the nineteenth century.

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[1] 1940 Yearbook of Agriculture, op. cit., p. 12-13.

[2] Edward D. Eddy, Colleges for Our Land and Time, Harper and Brothers, 1957, p. 1. (quoted by permission of publisher)

Societies

As early as 1743 Benjamin Franklin led in the organization of the American Philosophical Society, which gave much attention to agriculture and published articles pertaining to farming. The members' interest in agriculture led to the organization in 1785 of the Philadelphia Society for the Promotion of Agriculture, of which George Washington was an honorary member.

The Philadelphia Society consisted of farmers as well as business and professional men. Following the example of its European counterparts, the society developed plans for stimulating interest in agriculture that included discussions, prizes for significant experiments, and publications about improved techniques. The Society relied on correspondence and news media for dispensing information. It became inactive in 1793 with the death of Samuel Powel, former mayor of Philadelphia, who had served as president since helping found the organization. Although failing in its immediate goal of creating a permanent organization, the Philadelphia Society helped lay the foundation for the first American Agricultural Revolution.[1]

The South Carolina Society for Promoting and Improving Agriculture and other Rural Concerns was organized in Charleston, 1785, and ten years later was incorporated as the Agricultural Society of South Carolina.[2]

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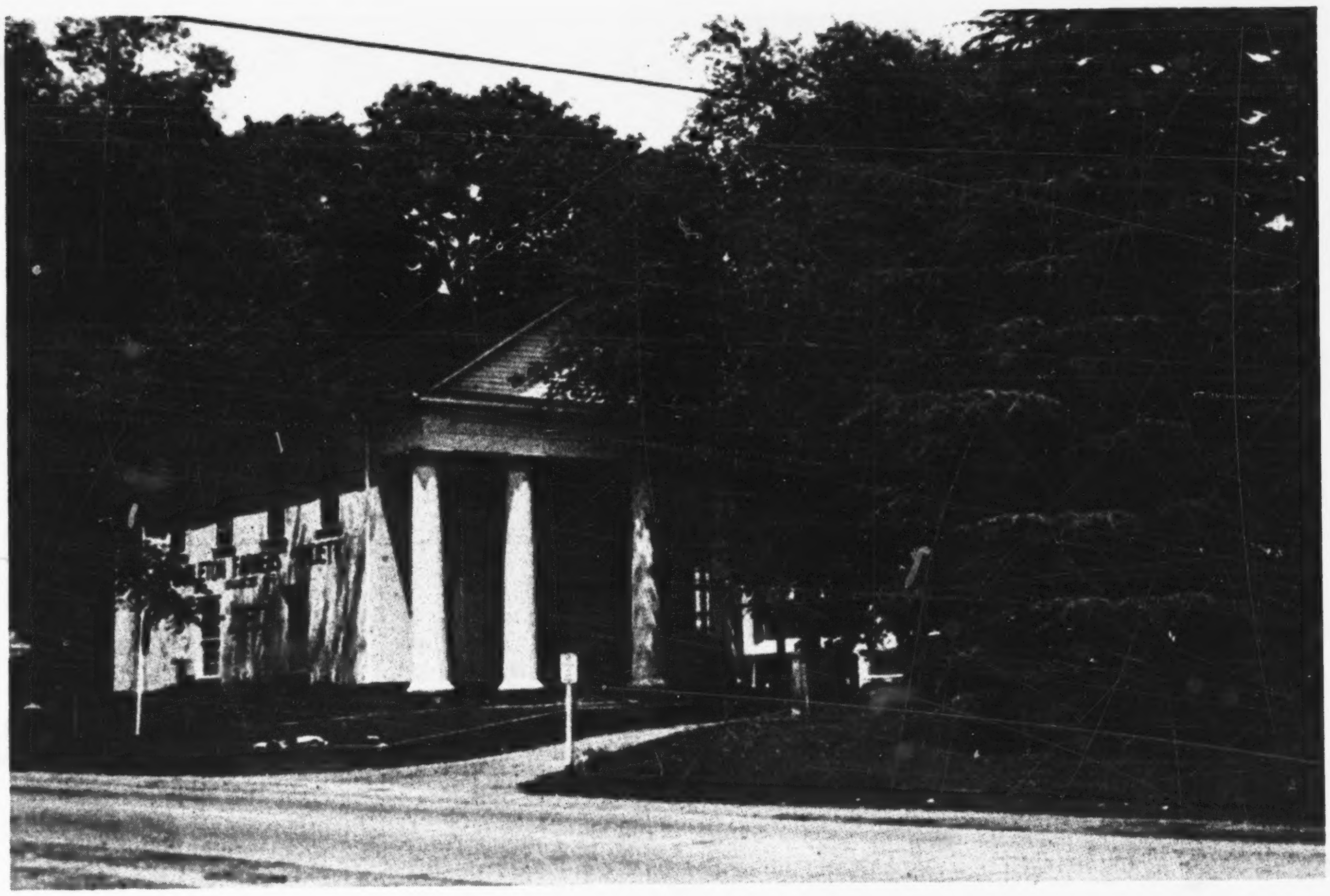
[1] Lucius F. Ellsworth, "The Philadelphia Society for the Promotion of Agriculture and Agricultural Reform," Agricultural History, 42:189-197, July, 1968.

[2] True, op. cit., p. 9.



Farmer's Hall, Pendleton, South Carolina, Completed 1828

The Pendelton (South Carolina) Agricultural Society was organized in 1815 and had its headquarters about three miles from the Calhoun estate, on which Clemson College is now located. When the Pendelton District was divided into Anderson and Pickens counties in 1826, a new courthouse was under construction. The Farmers Society purchased the old brick courthouse and partially completed building. Using materials from the old building the Farmers Hall, said to be the oldest in the United States, was completed in 1828 and continues to be in use.

Following the example of South Carolina, state organizations became the pattern in several states, including:

The Society of Maryland for the Encouragement and Improvement of Agriculture, 1786.

The Massachusetts Society for Promoting Agriculture.

The Society for Promoting Agriculture in the

State of Connecticut, 1794.

The movement came to a head in 1852 with the establishment of the United States Agricultural Society with headquarters in Washington. True estimated there were 300 active organizations by that time in 31 states and 5 territories. By 1860 the number had increased to 941 on the books of the United States Agricultural Society.[1]

In addition to the agricultural societies, agricultural fairs and the agricultural press contributed to the background of formalized instruction in agriculture in the United States.

Fairs and Exhibits

Cattle fairs had a long Colonial history. What appears to have been the first agricultural fair of a modern kind was held about 1810 in the District of Columbia. Many notables attended including President and Mrs. Madison.

Elkanah Watson, of Massachusetts, is credited with making the agricultural fair a lasting institution. He lead in organizing the Berkshire Agricultural Society in 1810, which staged its first fair in 1811. Thereafter, agricultural fair associations and societies, whose purpose was to foster and manage such fairs, increased rapidly.[2]

Publications

True indicates that prior to 1800 agricultural subjects were treated in newspapers or journals of a general character.[3] The American Farmer, established at Baltimore, Maryland, in 1819, was primarily an agricultural journal.

> By 1850 the agricultural press had already become quite important and made its influence felt throughout the United States. The agricultural

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[1] True, *op. cit.*, p. 23.

[2] 1940 Yearbook of Agriculture, *op. cit.*, p. 115.

[3] True, *op. cit.*, p. 28.

> papers of that day were not only diffusing a large amount of practical and useful information on a great variety of agricultural subjects, but they were also setting before the farming people the advantages of the application of science to agriculture and the desirability of establishing institutions in which these sciences should be taught, along with the theory and practice of agriculture.[1]

Text Books

L. H. Bailey in the Cyclopedia of Agriculture traces the development of text books of agriculture in the United States. He indicates that the spirit of scientific inquiry grew slowly among the pioneers of America and that it was not until the application of the birth of chemistry to agriculture in the early years of the 18th Century that great progress was made in applying science to farming. Most of the older books started with discussions of science as applied to agriculture. The earliest agriculture school books in the country were readers. The first of the readers which came to Bailey's attention was The Agricultural Reader by Daniel Adams, published by Richardson and Lord, Boston, in 1824.[2]

Educational Developments

Lyceums

For more than a generation prior to passage of the Land Grant Act in 1862 education was the constant and prominent political cause advocated by farmers and their leaders. The Lyceum Movement was the first phase of an organized drive for education for farmers and working class people.[3] The movement had its origin in Millbury,

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[1] *Ibid.*, p. 29.

[2] Cyclopedia of American Agriculture, *op. cit.*, p. 379-385.

[3] 1940 Yearbook of Agriculture, *op. cit.*, p. 135.

Massachusetts in 1826.

> Josiah Holbrook, a teacher and founder of an agricultural and manual labor school, published a handbook in 1826 providing for a comprehensive plan of popular education. This plan consisted of the organization of local lyceums, to be affiliated with state lyceums and these in turn with a national lyceum. Immediately after the plan was published, Holbrook succeeded in organizing 30 or 40 farmers and mechanics of Millbury, Massachusetts, into Millbury Lyceum No. 1, Branch of the American Lyceum. In a short time a number of towns in the vicinity of Millbury organized lyceums, and the Worcester County Lyceum was organized. The work of organization increased rapidly, and in 1830 a state lyceum was organized in Massachusetts. The lyceum movement spread throughout the country, and by 1833 there were about 1000 lyceums in the United States.[1]

Manual Labor Schools

Between 1819 and 1830 Manual Labor Schools were organized in Connecticut and a number of other states. The movement grew out of the teaching and work of Fellenberg in his schools at Hofwyl, Switzerland. It was hoped that the labor of teachers and students on school farms and in work shops would make the institutions and students partly or wholly self-supporting.[2]

The manual labor plan was popular in America during the forepart of the 19th century, especially in theological institutions. In North Carolina, Wake Forest Institute was chartered in 1833 under auspices of the Baptist Church. Donaldson Academy and Davidson Seminary were established during the same year.

The object of Wake Forest Institute, was "to enable young ministers to obtain an education on moderate terms, and to train up youth in general to a knowledge of science and practical agriculture".[1] Each student was required to furnish himself with an axe and a hoe and to labor three hours each working day. None of the schools of this kind in North Carolina ever did much in the teaching of Agriculture.

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[1] Roy W. Roberts, Vocational and Practical Arts Education, Harper and Row Publishers, 1965, p. 102.

[2] True, op. cit. , p. 34-35.

The first legislative action in Georgia concerning agricultural education occurred in 1823, when provision was made to establish a school of agriculture at public expense. The earlier experience with the Bethesda School gave encouragement to the establishment of manual labor schools. Denominational schools in particular experimented widely with the teaching of agriculture in schools over the state, which were organized in connection with large farms. Ten such institutions had been established by 1940. The manual-labor schools as originally established in Georgia had a short existence with the exception of the school at Cave Spring which became a state vocational school, serving exclusively the needs of the deaf.

Technical Institutes

A number of technical schools were established early in the 19th century, including the Rensselaer School at Troy, New York. The school was founded in 1824 by Stephen Van Rensselaer.

Rensselaer was established specifically to give instruction to sons and daughters of farmers and mechanics in the application of experimental chemistry, philosophy and the natural history of agriculture, domestic economy of the arts and manufactures. It was the first institution to offer a curriculum in agriculture leading to a degree. The name of the institution was changed to Rensselaer Institute in 1833 and to Rensselaer Polytechnic Institute in 1850. This institution had considerable general influence on the movement for scientific education relating to agriculture and mechanic arts which culminated in the Land Grant Act of 1862.[2]

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[1] Armstrong, The Development of Agricultural Education in North Carolina, Unpublished Master's Thesis, 1932, p. 18-19.

[2] True, op. cit., p. 42.

Agricultural Schools and Academies

The first school devoted exclusively to agriculture was established in 1821 at the Gardiner Lyceum in Maine. Its founder was Robert Gardiner, a graduate of Harvard College, who inherited a tract of land on the Kennebec River where he resided for more than 60 years. Though not himself a practical farmer, he took a deep interest in promoting agriculture.[1]

It is significant that 1621 is also the date commonly accepted for the beginning of public secondary education in the United States, since it was in that year that the Boston Latin Grammar School was opened.[2]

A school for elementary instruction in agriculture, known as the Boston Asylum and Farm School on Thompson's Island in Boston Harbor was established as a philanthropic venture in 1933. The school is still in operation but without access to a school farm.

Public Education

"For many centuries in the Old World, the church, rather than the state was looked upon as the proper authority under which public education should be conducted, and the support of education was classed among works of charity."[3] The use of public lands for the support of education began early in the American colonies. Frontiers in the New World constituted a natural resource with potentialities for support of programs in the public interest.

Ordinances of 1785 and 1787

The precedent of land grants for the support of education came on May 20, 1785, when the Continental Congress inserted in the Northwest Ordinance the provision that "there shall be reserved the lot No. 16, of each township, for the maintenance of public schools within the said township".[1]

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[1] True, *op. cit.*, p. 35.

[2] Herbert M. Hamlin, *Agricultural Education in Community Schools*, The Interstate Printers and Publishers, 1949, p. 417.

[3] True, *op. cit.*, p. 18.

The Ordinance of July 13, 1787, for the government of the Northwest Territory contained the declaration that "religion, morality, and knowledge being necessary to good government and happiness of mankind, schools and the means of education shall forever be encouraged".[2]

The Ordinance of July 13, 1787, was immediately followed by the Ordinance of July 23 for the sale of public lands in Ohio, under which section 16 of each township was to be reserved for the maintenance of public schools and "not more than two complete townships to be given perpetually for the purpose of a University".[3]

Eddy indicates that by 1857 sixty million acres of public land had been set aside for the support of common schools and that four million acres had been granted to fifteen states to endow state universities.[4]

Developments 1775 to 1860

In his review of developments in public education Hamlin points out there was little change for 50 years after the colonies gained their freedom. Following this there was great activity in the North led by such crusaders as Horace Mann and Henry Barnard.

> Massachusetts had been a pioneer in public education, but the public schools of the state, the best in the country, were characterized in 1827 as degraded, held in low esteem by their warmest friends, and considered worthy of attendance only by children of the

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[1] Ibid., p. 20.

[2] Ibid., p. 21.

[3] Ibid., p. 21.

[4] Eddy, op. cit., p. 22.

artisan and laboring class. As late as 1840 only one-half of the children of New England were given any free education, one-seventh of the children in the middle States, and one-sixth of the children in the West. There was no public elementary and secondary education in the South.[1]

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[1] Herbert M. Hamlin, The Public and Its Education, Interstate Printers and Publishers, 1955, p. 39-40. (by permission of publisher).

CHAPTER IV
DEVELOPMENTS CIVIL WAR TO 1900

Introduction

The middle of the 19th century was marked by the Civil War and the Land Grant Movement. There is disagreement among historians as to the relationship of the War to economic developments which characterized the period.

In his sketch on American Agriculture, Carver again divides the period in two sections, much as he did with the previous span starting with the Colonial period. To paraphrase his statements, agriculture from 1860 to 1887, having already passed into the commercial stage, was ready to respond to new opportunities. The expansion of the agricultural enterprise was such as the "world had never seen before".[1] Carver attributes the remarkable growth to the Homestead Acts and the expanding armies. He refers to the period beginning about 1857 as the Reorganization of American Agriculture.[2]

In the 1940 Yearbook of Agriculture Edward designated the period of changes which had undergone during the previous 100 years as the Agricultural Revolution. He listed several forces underlying the revolution:

1. The passing of the public domain into private ownership by means of liberal land policies.

2. The completion of the westward movement of settlement.

3. The invention and popularization of improved farm implements and machinery.

4. The extension and development of transportation facilities.

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[1] Carver, Cyclopedia of American Agriculture, op. cit., p. 39.

[2] Ibid., p. 39.

5. The migration of industries from the farm to the factory.

6. The expansion of domestic and foreign markets.

7. The establishment of agencies for the promotion of scientific knowledge relating to agriculture--agricultural societies, agricultural fairs, periodicals for farmers, the Federal Department of Agriculture, and agricultural colleges and experiment stations.

8. The resort to conscious and concerted political organization and action by farmers in an effort to retain an equitable place for agriculture in the economic structure of the Nation.[1]

Eddy refers to the period beginning with the Civil War as the Industrial Revolution. The start of the revolution paralleled the beginning years of the Land Grant Colleges.

> "With an unlimited supply of raw materials, the extension of more rapid transportation, and the increase in market possibilities, industry came into its own."[2]

> "The tremendous industrial expansion resulted in a desperate struggle to employ trained men for the new machine-operated civilization."[3]

In an article carried in Agricultural History, Rasmussen points out the effects of the Civil War on the North and the South as possible contributing factors to agricultural reform. He states that "the Civil War acted as a catalyst in the passage of four laws, for better or worse, within a few months after the Southerners had withdrawn from Congress".[1] The laws established the United States Department of Agriculture, granted homesteads to settlers of federal lands, granted land for the construction of a transcontinental railroad, and initiated the Land-Grant Movement. Rasmussen summarized his article with the following statement:

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[1] Edwards, 1940 Yearbook of Agriculture, op. cit., p. 221-222.

[2] Eddy, op. cit., p. 58.

[3] Ibid., p. 58.

> The Civil War acted as a catalyst which encouraged the rapid adoption of horsedrawn machinery and other implements, enabling farmers to offset labor shortages and to profit from high prices. The Civil War also acted as a catalyst in making possible the adoption of a series of agricultural reform measures within a period of a few months. The result was that farmers, ready or not, found themselves in the midst of the first American agricultural revolution.[2]

The Land Grant Movement

Chronologically, the background of public school education in agriculture paralleled that of the land-grant movement. Prior to the Civil War "there had been agitation for the establishment of state schools for the agricultural and industrial education of the general population, who had not been well served by the educational institutions thus far established".[3]

A number of agricultural schools and colleges were established from 1850 to 1860, most of which disappeared by the time of the passage of the Morrill Act of 1862. One of the best known and conceived projects was the Peoples College in upstate New York.[4] The college which opened in 1860, was forced to close within a year, due to the beginning strife of the Civil War. It had served the purpose of attracting attention to a plan for providing agricultural and technical instruction.[1]

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[1] Rasmussen, "The Civil War-A Catalyst of Agricultural Revolution," Agricultural History, 39:194, October, 1965.

[2] Ibid., p. 195.

[3] Hamlin, Agricultural Education in Community Schools, op. cit., p. 418.

[4] Eddy, op. cit., p. 14.

The Agricultural College of the State of Michigan created by legislative enactment in 1855 was the first stat college of agriculture to be established in the nation. Authority for supervision of the college, located on a larg farm near Lansing, was vested in the State Board of Education, and designed "to improve and teach the science and practice of agriculture".[2]

Two additional state colleges of agriculture were established prior to the passage of the Morrill Act. In 1856 th Maryland legislature passed "an act to establish and endow an agriculture college in the state of Maryland". The college was opened for students in 1859.[3]

The initiative for establishing a Farmers High School o the state of Pennsylvania is credited to the Philadelphia Society for Promoting Agriculture. The school was opened i 1859 on a 200-acre tract in Centre County. The terms of th charter made it possible to change the name by court order in 1862, to become the Agricultural College of Pennsylvania.[4]

The Morrill Acts

The principle of federal support for education became firmly established with passage of the Morrill Act of 1862.[5] It provided for the "endowment, support, and maintenance of at least one college (in each state) where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach suc branches of learning as are related to agriculture and the mechanics arts...in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life". (Sec. 4)

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[1] *Ibid.*, p. 15.

[2] True, *op. cit.*, p. 60.

[3] *Ibid.*, p. 67.

[4] *Ibid.*, p. 70.

[5] 12 Stat. L. 503-5 (1862)

The law provided a grant of land to each state on the basis of 30,000 acres for each member of Congress. The Continental Congress had set the precedent of land grants to stimulate education in passing the Ordinances of 1785 and 1787.

Volumes have been written regarding the history and passage of the Morrill Act. In 1962 the Centennial Office of the American Association of Land Grant Colleges and State Universities issued a fact book containing a capsule history of the movement and biographical information regarding efforts of early leaders--Jonathan Clemson, Justin Morrill, and Thomas Clemson--in behalf of the legislation.[1]

Iowa became the first state in 1862 to accept provisions of the Morrill Act followed by Vermont and Connecticut. Eventually, colleges in the other states met provisions of the act.

The Second Morrill Act was passed by Congress in 1890.[2] Two restrictions were placed on the states in the expenditure of these grants:

1. They were "...to be applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction". (Sec. 1)

2. "...no money shall be paid out under this act to any State or Territory for the support and

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[1] Land Grant Centennial Fact Book, American Association of Land Grant Colleges and State Universities, 1962.

[2] 26 Stat. L. 417-9 (1890)

> maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act if the funds received in such State or Territory be equitably divided...." (Sec. 1)

The Hatch Act

The need for experimental work in agriculture became apparent as instructional programs were developed under terms of the Land Grant Act of 1862. "The professor's own dilemma was compounded by the number of requests from farmers who wanted additional answers to complex questions.... To this situation were added the serious national problems of soil exhaustion and abandoned farms."[1] In view of such problems experiment stations were established in a number of states prior to passage of the Experiment Station Act of 1887. The Act carries the name of William H. Hatch, Representative in Congress from Missouri, who was influential in its passage. This Act authorized money for the establishment of agricultural experiment stations at colleges and universities endowed under the Land Grant Act. Under terms of the Act the experiment stations "were to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiment respecting the principles and application of agricultural science".[2]

The Hatch Act was an important piece of legislation as related to vocational education in that it provided the means for conducting research upon which subject matter in agriculture might be based.

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[1] Eddy, op. cit., p. 94.

[2] 24 Stat. L. 440 (1887) Sec. 1

The Nelson Act

The Nelson Amendment, passed in 1908 to the Second Morrill Act, carried an additional provision whereby--"colleges may use a portion of this money for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts. The proviso was added as a result of the growing interest in the development of instruction in agriculture at the secondary level and the dearth of adequately prepared teachers.[1]

It should be noted that the Morrill Acts and the Nelson Amendment provided funds for resident teaching only. Funds for research and extension were first provided in the Hatch Act of 1887 and the Smith-Lever Act of 1914.

Early Efforts to Teach Agriculture

In his publication on the Land-Grant Movement, Munford indicates that the first efforts to teach agriculture were in the main unsuccessful. He states that "the Nation was not yet ready for the kind of agriculture taught by these (early) institutions. Indeed it is doubtful if there existed a body of knowledge which could be taught at that time."[2]

In reviewing progress of the colleges created by the Morrill Act in 1862 and passage of the Hatch Act in 1887, Mumford makes the following statement:

> "The land grant colleges during the first twenty-five years of their existence, at least from the standpoint of their services to agriculture and rural people, must be regarded as of limited value. The fond hopes of their founders had not been fulfilled. They satisfied neither the administrators nor the farmers. The general opinion of the time, as expressed in farm

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[1] True, *op. cit.*, p. 273.

[2] F. B. Mumford, *The Land Grant College Movement*, Missouri Agricultural Experiment Station Bulletin 419, 1940, p.37.

> papers and in the proceedings of agricultural socities and boards of agriculture, was very critical."[1]

In commenting about the role which the Agricultural Colleges were destined to play, Mumford states:

> "The colleges of agriculture have never lost sight of their major purpose which was an is the education of young men and women in the broad field of agriculture. While in the popular mind they are primarily concerned with the training of students in the principles and practices of farm enterprise, the actual result of their training has been to prepare them for a great variety of successful enterprises in which a knowledge of agriculture is important....
>
> It is highly important that these institutions prepare large numbers of their graduates who will become practical farmers, either on their own farms or as managers of estates. But it is even more important that the young men trained in the college of agriculture who, for any reason, may become teachers of agriculture, agricultural extension agents, or researchers in agriculture shall have a thorough, sound training in the sciences upon which modern agriculture is builded.
>
> From the standpoint of the public welfare, the agricultural teacher either in a college, a high school, or as a county agricultural agent will, under present conditions, have a much more far reaching influence upon agriculture in general than will a student and a graduate who is limited to his own landed estate. However, too small a proportion of the students graduating from colleges of agriculture have become actual farmers."[2]

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[1] Ibid., p. 20.

[2] Ibid., p. 39-40.

Negro Land Grant Colleges

Three colleges attended predominately by Negroes qualified as land grant institutions prior to enactment of the 1890 amendment to the Morrill Act. The pioneer institution was Alcorn University, established in 1871 in Mississippi. The state changed its name in 1878 to Alcorn Agricultural and Mechanical College. The other endowments were to Claflin University in South Carolina, later to become South Carolina State College, Orangeburg and to Hampton Institute. The latter gave up its status as a land grant institution in 1920. Virginia State College at Orangeburg was thereafter designated as the land grant beneficiary for the state.

Following 1890, private or state institutions were designated as Negro Land Grant Colleges in the remaining Southern states. Selected quotations from Eddy's chapter on The Negro Land Grant Colleges give some indication of the special conditions and problems encountered by the institutions.

> "Both in the early and in the succeeding years, there were social and economic conditions in the Southern states which affected profoundly the course of Negro education at all levels, including land-grant higher education. The Negro was seldom self-employed; he was either a tenant on a farm or a domestic servant. His wage-earning capacity was controlled in many cases by factors other than ability. Even in industry his place was restricted and confined. The social aspects of living particularly worked against an interest in advancement through education....
>
> In most Southern states the private Negro school and college preceded by some years the public institution. As a result, the private colleges had a dominant influence on the subsequent Negro Land-Grant Colleges. The church colleges, for instance, had long emphasized 'cultural' instruction with very little, if any, place given to vocational training. The early Negro Land-Grant College conformed to this accepted pattern. As the denominations became less able to meet the demand, however, the church colleges faded in importance to a sufficient extent to allow the public institutions to gain the place and prestige

prerequisite to expansion in scope and function."[1]

Not the least of the problems of the Negro-Land Grant College was the lack of any adequate system of Negro public education in the South. Public high schools were a later growth in only the larger cities. As late as 1915, there were but sixty-four public high schools for Negroes in the Southern states, and only forty-five of them offered a four-year curriculum.[2]

The principal function of the Negro Land-Grant Colleges, in contrast to the other land-grant institutions, has been largely that of teacher-training.... The percentage of agricultural graduates entering teaching runs to over 90 percent in some of the Negro Land-Grant Colleges....[3]

The Negro Land-Grant Colleges have been and continue to be called upon for the rendering of service, both in quality and quantity, far beyond that usually expected of institutions of their size and stature. The seventeen states in which the colleges are located are populated by the great majority of the nation's Negroes, most of whom live in rural areas, leaving to the Negro land-grant institutions a staggering job of raising the level of living and working conditions.... Despite the immensity of the task and these many handicaps, the Negro Land-Grant Colleges have succeeded, through the conviction and determination of a core of hard-working educators, in making a contribution to the life of their race which otherwise would never have been made.[4]

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[1] Edward D. Eddy, Colleges for Our Land and Time, Harper and Brothers, 1957, p. 259. (by permission of publisher).

[2] Ibid., p. 259-260. (by permission of publisher).

[3] Ibid., p. 261. (by permission of publisher).

[4] Ibid., p. 264. (by permission of publisher).

Department of Agriculture

The United States Department of Agriculture, established by the Act of Congress and signed by President Lincoln on May 15, 1862, was an outgrowth of the agricultural division of the Patent Office which had been in operation since 1839. Isaac Wilson took the oath of office as the first Commissioner of Agriculture on July 1.

Before the Department was established there was agitation to give it cabinet status, which the Congress approved in 1899. James Wilson of Iowa was appointed as Secretary of Agriculture in 1897 and was the first secretary to serve as a member of the Cabinet. He set up the guidelines for the Department as it is now known.

The Department of Agriculture began issuing Farmers Bulletins in 1889 and in 1894 started to publish the Yearbook of Agriculture which since 1849 had been known as *Part II: Agriculture of the Annual Reports of the Commissioner of Patents and Agricultural Report*.[1]

Agricultural Organizations

Agricultural societies, were among the first organizations of farm leaders to be developed in the United States. (see p.30) The need for more formal organizations of farmers became apparent as the expansion of agriculture occurred following the Civil War.

National Grange

The first of the organizations to reach a substantial number of farmers was the Patrons of Animal Husbandry, better known as the Grange, which came into existence in Washington, D. C. in 1867. The idea for organizing is credited to Oliver Kelley, a clerk in the Agriculture Bureau, who served as the original secretary of the organization. By 1873, there were Granges in all but four states.

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[1] U. S. Department of Agriculture, *After a Hundred Years*, Yearbook of Agriculture, 1962, p. 7-9.

The Declaration of Purposes of the National Grange drawn up at the annual meeting in St. Louis in 1873 is said to rank as one of the "greatest platforms for agricultural education that has ever been written".

Farmers Alliance

Among the organizations which followed the Grange was the Farmers Alliance. This order which was similar to the Grange emphasized social and political activities, and to a certain extent, cooperative enterprises. A prominent objective of the organization, however, was educational.

The Alliance movement began about 1872 and was a part of the broad general struggle that grew out of the discontent in the farm areas. A Union of the Texas Farmers Alliance and the Farmers Union of Louisiana, and the National Farmers Alliance and Cooperative Union was formed in 1887. In 1888 the Farmers Wheel became a part of the joint organization, which in 1889 became known as the National Farmers Alliance and Industrial Union.[1]

The Alliance was strongest in the South, with a large membership; however, in the Middle West, at the 1890 meeting, there were delegates present from twenty-seven states and territories.

Land-Grant Association

In his book Colleges for Our Land and Time, Eddy traces developments of the land-grant colleges during the first two decades of their existence. He notes that they were "bound together in a common purpose" and "felt the need for definition of a common program and increased stature".[2]

At the first official convention of Land-Grant leaders, held in 1885, plans were initiated for establishing a national organization. When the first annual meeting was held by this general movement.[1]

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[1] Murray R. Benedict, Farm Policies of the United States, 1790-1950, The Twentieth Century Fund, 1953, p. 106.

[2] Eddy, op. cit., p. 108.

Institutes and Short Courses. The rural people who supported the establishment of agricultural colleges were not satisfied to have the institutions confine their efforts to resident teaching and experimental work. They demanded information of most use to them. Eventually, this lead to the establishment of extension services in the several states, followed by passage of the Smith-Lever Act of the Federal Government in 1914. Before such services were established, the universities did considerable extension work through other mediums, including institutes and short courses.

The first farmers institute appears to have been held at Springfield, Massachusetts, in 1861, under auspices of the State Board of Agriculture. A farmers institute was sponsored by the Kansas Agricultural College in 1868. Iowa State College held a farmers institute at Cedar Falls, Iowa, in 1870, believed to be the first institute held away from the sponsoring college.[2]

While colleges of agriculture were being established, problems were encountered in securing enrollments and in developing curricula leading to degrees. The situation gave encouragement to the offering of credit and non-credit short courses, in which Wisconsin pioneered. In 1884 the state Board of Regents appointed a committee to consider "some plans for a more convenient and useful course of agricultural instruction at the University". The first sessions of the short course were held during the winter of 1886 with nineteen young men registered. The highest previous enrollment in any course at the college of agriculture had been nine. With perfection of the Babcock Test, impetus was provided for adding a Dairy School in 1891 to the offering.[3]

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[1] True, *op. cit.*, p. 276.

[2] Adapted from *A Study of the Extension Service in Agriculture and Home Economics in Iowa* by J. B. Davidson, H. M. Hamlin and P. C. Taft, Collegiate Press, Inc., 1933.

[3] L. M. Sasman, *The Development of Vocational Agricultural Education in Wisconsin*, Agriculture Series Bulletin No. 4, State Board of Vocational Education (undated), p. 6, 22.

Agricultural short courses were thereafter established in a number of land grant colleges at the turn of the century.

Schools of Agriculture. The distinction between short courses in agriculture and offering of agricultural schools within early years of operation by colleges of agriculture, cannot be distinctly defined. In fact, except for credit, the original curriculum offerings in agriculture would scarcely be recognized as of the collegiate level.

A school of agriculture of the apprenticeship type was authorized by the Minnesota Board of Regents in 1886. The school which became operative in 1888 at St. Anthony on the New University Farm was promoted as the first of its kind to be established in the United States.[1] Attendance in the beginning was limited to male students, in a course extending over two years from October to March. The students were expected to open the summer months in practical training on farms. Much of the plan of operation was transplanted from the folk schools of Northern Europe. The school was terminated in 1960, by action of the Regents who deemed that the original needs had been fulfilled.

Four branch schools of agriculture, established later in Minnesota, have been replaced by other educational institutions.

Schools similar to the one at University Farm, St. Paul were established during the next twenty five years in a number of states, including the Nebraska School of Agriculture at Lincoln in 1895. A branch of the Nebraska school at Lincoln was established by legislative enactment in the west-central part of the state at Curtis in 1913. This school served a unique function in the community, operating the equivalent of a four-year high school. When the school was organized, the community raised $29,000 for the purchase of a farm for use as a laboratory and upon which the college of agriculture maintained purebred herds of livestock. Originally,

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[1] Andrew Boss, The Early History and Background of the School of Agriculture at University Farm, St. Paul University of Minnesota, 1941, p. 7-8.

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the students lived in private homes. Later dormitories were added to the facility. Approximately 3000 boys and girls graduated before the school was completely phased out at the close of the 1967-68 school year and replaced by the Nebraska School of Technical Agriculture, with expanded facilities. With the transition, a public high school was first established in the community in the fall of 1968.[1]

An agricultural school was founded at Storrs, Connecticut, by an act of the General Assembly in 1881. With financial assistance derived from the Hatch Act, the 1893 Assembly authorized the conversion of the school to the Storrs Agricultural College.

A number of privately financed schools of agriculture were established about the same time. Conspicuous among these was the National Farm School, located near Doylestown, Pennsylvania, which was chartered in 1896. The school was founded by Joseph Kruskopf, a Jewish rabbi living near Philadelphia. The nonsectarian school was organized to train city boys of limited means for careers in farming and other agricultural occupations.[2]

Readjustment Developments. "After the Civil War, Agriculture was the occupation of the majority just as it had been before the fighting broke out in 1861; in fact, it was the only available means for earning a livelihood for the bulk of Negroes and whites in the South."[3]

Saloutos estimates that 4,000,000 blacks were freed by the war, that 250,000 Negroes were free before hostilities began and that there were about 8,000,000 whites in the South, who were principally farmers. The latter group fell in three categories: the large planters, small white farmers, and the "poor white trash".[1]

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[1] Interview April 11, 1968, with Horace C. Crandall, a former superintendent of the school.

[2] Stimson and Lathrop, op. cit., p. 407.

[3] Theodore Saloutos, "Southern Agriculture and the Problems of Readjustment: 1866-1877," Agricultural History, 30:58, April, 1956.

In the introduction to his book, Bond indicates that "...perhaps the most outstanding achievement in educational progress of any group in the United States, or elsewhere has been the advancement of Negro Education since the Civil Wars."[2] Prior to the War, education for the Negro was provided only in scattered schools in the North where 1.7 of the Negro population of school age attended schools in 1850.

The Morrill Act made possible the establishment of colleges of agriculture and mechanic arts throughout the United States. During the Civil War only the Northern States were able to accept provisions of the Act; but after peace was declared, the Southern States started to accept the provisions.

In 1870, Hampton Institute in Virginia became a quasi-public institution and qualified for Federal land-grant funds. In 1920, Hampton returned to a purely private foundation and Virginia State College at Petersburg was designated as the Negro land-grant institution.

An introduction by William Howard Taft, Chief Justice of the United States and President of the Institute Board, to a publication regarding the influence of Hampton gives insight to the status and influence of the institution.

> Hampton as an educational institution presents two aspects. One is that of a place of instruction where young men and women may be taught how to use their heads and hands effectively, how to learn and how to work, how to become educated with general information and mental training, and how to apply these to labor in such a way as to make that labor effective for future use in earning a livelihood and in proving the value of the possessor as a citizen of the community in which he is to live his life....

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[1] _Ibid_., p. 58.

[2] Horace Mann Bond, _The Education of the Negro in the American Social Order_, Prentice Hall, Inc., 1934, p. vii.

> The second aspect of Hampton Education is in the use of the religious spirit and the discipline of labor to make the students at Hampton real men and women, with a full sense of the difficulties they must face in struggling against the inevitable obstacles to their progress—social, racial and political....
>
> Upon the southern white man depends the solution of the race problem, and one of the hopeful signs is his growing interest in the method of solving it at Hampton and Tuskegee and the other great Negro educational institutions of the South.[1]

In 1881 Booker T. Washington, who studied under Samuel Armstrong, founder of Hampton Institute, opened the Tuskegee Normal and Industrial Institute at Tuskegee, Alabama. Some observations by A. C. True regarding the program at Tuskegee and influences of the Virginia and Alabama institute are noted herewith.

> The influence of the Hampton and Tuskegee Institutes became great throughout the South, and the separate colleges for Negroes established under the Morrill Act of 1890 largely followed their plan of organization and work, as far as this was possible with the limited funds at the disposal of these State institutions. At least seven of the State colleges for Negroes had their beginnings prior to 1890, but in only three of them were agricultural courses established before that time.[2]

Public Education

The years after the Civil War constituted a period of unprecedented growth. Over the last three decades of the century the country doubled in population. Change was coming and new demands were to be made in the country's educational system.[1] Perhaps the most notable development was the introduction of elementary and secondary education in the South.

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[1] Walter C. John, Hampton Normal and Agricultural Institute, U. S. Bureau of Education Bulletin 1923, No. 27, p. 3-4.

[2] True, op. cit., p. 284-285.

Compulsory attendance in elementary schools was first required in Massachusetts in 1852. In 1870, 57 per cent of children 7 to 17 years of age were enrolled in public schools: in 1900, 72.4 per cent were enrolled. The average schooling of the population rose from 4 months in 1880 to 50 months in 1900.[2]

The early pattern of secondary education was not terminal but rather served in a feeder capacity for graduates of grammar schools who chose to enter college. The schools were not necessarily four-year institutions, but "steps in a ladder between the elementary school and higher education". Consequently, most of the students who attended high school were college bound. In 1870, eight of ten high school graduates attended college. In fact, there were then more college graduates in the country than people with high school diplomas only.[3]

Later in the century the role of the secondary school changed considerably. Beginning in 1880 the Census showed that more and more young people entered and graduated from high school. Simultaneously, the per cent who entered college declined. Venn indicates that the "growth and changing role of the high school had a profound effect on American higher education, especially in the land-grant colleges".[4] College entrance requirements were raised as more students were graduated from high schools. Simultaneously, offerings in agriculture and related studies in the land-grant institutions took on a higher level with the development of graduate work and research. Whereas these colleges originally served a vocational role, their later development left a "vaccum in the field of middle-level vocational preparation".[1]

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[1] Venn, _op_. _cit_., p. 45.

[2] Hamlin, _The Public and Its Education_, _op_. _cit_., p. 42.

[3] Venn, _op_. _cit_., p. 46.

[4] _Ibid_., p. 46.

During the 1800's "courses in farming became courses in agricultural science, and the mechanics arts grew into engineering".

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[1] *Ibid.*, p. 47.

CHAPTER V
DEVELOPMENTS FROM 1900 TO 1917

Characteristics of the Period

From the standpoint of agriculture the beginning of the present century may be characterized as a period of expansion and development. The Farmers Cooperative Union was organized in 1902 and the first Farm Bureau was established at Brome, New York, in 1906. Legislation for cooperatives was enacted in 1914. Prices were relatively stable until the thrust of World War II.

The acceptance and expansion of public high schools during the corresponding period, was a major development in education. Simultaneously, the teaching of agriculture in elementary schools expanded materially, only to decrease somewhat as the subject appeared in secondary school curricula.

The outbreak of the war in Europe heightened the passage of the Smith-Lever Act in 1914 and the Smith-Hughes Act in 1917.

Country Life Commission

In 1908 President Roosevelt appointed a committee headed by Liberty Hyde Bailey to serve as a commission that would report "upon the present conditions of country life, upon which means are now available for supplying the deficiences that exist and upon the best methods of organized permanent effort in investigation and actual work". The report of the committee was published as Senate Document No. 705, 60th Congress, 2nd Session 1909. The document was not available for popular distribution; consequently, the commission arranged for having it duplicated by a regular book publisher.[1]

The Congress did not see fit to give the commission official status and finances to continue its assignment. However, the work of the commission was reflected in several governmental actions during the next few years. The recommendations of the Commission were listed as "...great movements of the utmost consequence that should be set under way at the earliest possible time".

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[1] Report of the Commission on Country Life, Sturgio and Walton Company, 1911.

> 1. Taking stock of country life.—There should be organized...under government leadership, a comprehensive plan for an exhaustive study or survey of all the conditions that surround the business of farming and the people who live in the country, in order to take stock of our resources and to supply the farmer with local knowledge....
>
> 2. Nationalized extension work.—Each state college of agriculture should be empowered to organize as soon as practicable, a complete department of college extension, so managed as to reach every person on the land in its state, with both information and inspiration....
>
> 3. A campaign for rural progress.—We urge the holding of local, state and even national conferences on rural progress, designed to unite the interests of education, organization and religion into one forward movement for the rebuilding of country life. Rural teachers, librarians, clergymen, editors, physicians and others may well unite with farmers in studying and discussing the rural question in all its aspects. We must in some way unite all institutions, all organizations, all individuals, having any interest in country life into one great campaign for rural progress.[1]

Educational Developments

The advent of mass education in the United States became conspicuous about 1900. The first Office of Education survey in 1870 showed that only 57 per cent of school age children attended public school. By 1918 all states had compulsory attendance laws. High schools, confined largely to cities and a few wealthy rural areas, were becoming a recognized part of American life.

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[1] *Ibid.*, p. 28-29.

In 1899-1900 only 11.4 per cent of persons 14-17 years of age were enrolled in grades 9-12. The per cent increased to 15.4 by 1910 and to 94.1 per cent in the fall of 1967. Six and four-tenths per cent received diplomas in 1899-1900 and 75.3 per cent in 1966-1967.

The university which existed in name only in 1880 became a reality during the forepart of the 20th century. The number of persons who received bachelors and first professional degrees was 15,539 in 1899-1900, 37,199 in 1909-1910 and an estimated 570,000 in 1966-1967.[1]

School programs were also changing. The classical emphasis of upper schools was giving way to a curriculum designed to prepare students for the business of living. The comprehensive high school encompassing both liberal and vocational college preparation, and terminal programs were evolving.[2]

Instruction in Agriculture

"The demand for popular education in the teaching of agriculture came suddenly."[3] After half a century of propagandism by land-grant colleges, the United States Department of Agriculture and other organizations, the public was placed in a receptive attitude. The early introduction of agriculture in public schools was favorably received.

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[1] Progress of Public Education in the United States of America 1967-68, Report of 31st International Conference on Public Education.

[2] Highlighting the Progress of American Education, A Brochure Issued by Centennial Committee, U. S. Office of Education, 1967.

[3] G. A. Bricker, Agricultural Education for Teachers, American Book Company, 1914, p. 8.

Instruction of agriculture in elementary schools became widespread about 1905. By 1908 agriculture was being taught in the elementary schools of Alabama, Arkansas, California, Georgia, Louisiana, Maine, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, South Dakota, Texas and Wisconsin.

The growing popularity of agriculture in public schools created a problem of teacher education for which institutions of higher education were unprepared.

Elementary Schools

Due to lack of reporting, enrollment data pertaining to early offerings of agriculture in elementary schools are incomplete. However, the movement became quite popular about 1905 and preceded the impetus for introducing the subject in secondary schools. The effectiveness of instruction at the elementary level varied considerably, due to lack of teacher preparation and teaching materials.

In 1907 the Department of Interior printed a manuscript based on a study of agricultural education including nature study and school gardens, by James R. Jewell of Louisiana. In an introduction to the publication Commissioner Brown indicated that there was an unusual movement in progress looking to the extension of agricultural education in elementary schools and high schools in several states.[1] He stated that the movement was undoubtedly stimulated by the growth of agricultural and mechanical colleges and activity in the Department of Agriculture at Washington. In 1909 an examination in agriculture was required for certification of teachers in Alabama, Georgia, Mississippi, Missouri, Nebraska, New York, North Carolina, South Dakota, Virginia and Wisconsin.[2] Courses on nature study and gardening for teachers were offered by a number of agricultural colleges and normal schools.

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[1] James R. Jewell, *Agricultural Education Including Nature Study and Small Gardens*, U. S. Bureau of Education, Bulletin No. 2, 1907, p. 5.

[2] *Ibid.*, p. 58.

Nature Study. The subject of agriculture as introduced in elementary schools of the United States went through a transition of nature study, followed by school gardens. In commenting about the nature study movement Jewell indicated "no one alive to the present status of education in the United States needs to be told of the spread of nature study during the past few years. It is now an integral part of the course of study in several of the states."[1] In referring to nature study Bailey stated, "It is the purpose of nature study to develop the child's native interest in himself and his surroundings."[2]

The initiative for promoting nature study is credited to workers in several states. In 1901 Hampton Institute in Virginia began the publication and distribution through the southern states of nature study leaflets for teachers. Under the leadership of Dean L. H. Bailey the first of a series of nature study leaflets was published at Cornell University in 1896. His department made use of lectures, correspondence, and the organization of pupils into clubs with the object of "interesting teachers and pupils of public schools in nature study with special reference to agricultural conditions". In 1905 there were 486 junior naturalists clubs in New York with a membership of 14,318 children.[3]

Publications similar to that of New York were issued as extension bulletins in Ohio, Maine, Michigan and Pennsylvania. Nine-tenths of the rural and village schools of Missouri adopted a 1905 course of study which emphasized the correlation of each subject with nature study. The subject was also included in a uniform course of study in Indiana. Special courses for teachers were given at summer schools in a number of states including North Carolina, Nebraska and Connecticut.[4]

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[1] Jewell, op. cit., p. 16.

[2] Bailey, op. cit., p. 469.

[3] Jewell, op. cit., p. 17.

[4] Ibid., p. 17.

School Gardens. Considerable initiative for promoting the school garden concept in the South is attributed to the Whittier Laboratory School at Hampton Institute in Virginia, where plots of ground were made available for the use of children. By 1906 the United States Department of Agriculture estimated that there were about 75,000 school gardens in the United States. Illinois lead in the number of gardens, followed by New York, Pennsylvania, and Massachusetts. Many of the larger cities including Philadelphia, Pennsylvania; East Orange, New Jersey; Rochester, New York; and Cleveland, Ohio, had gardens as a part of their school systems. There were also school gardens in a large number of country districts of the middle west, notably in Illinois, Iowa, Minnesota and Wisconsin.[1]

State Programs. Considerable support for the introduction of agriculture in public schools came from the United States Department of Agriculture through the activities of A. C. True and D. J. Crosby. At The Ohio State University Mr. A. B. Graham was employed as superintendent of agricultural extension with responsibility to cooperate with common schools in extending the teaching of agriculture. Dean Davenport at the University of Illinois prepared a course in agriculture which was used by many schools in that state. In Indiana the superintendent of schools published monthly bulletins to assist in teacher preparation, and Purdue University stressed the subject at farmers institutes.[2]

County superintendents in Illinois, Indiana, Iowa, Kansas, Nebraska, and Texas promoted formal instruction by the formation of boys agricultural clubs. The movement was started in 1901 by the president of the farmers institute in Macoupin, Illinois.[3]

It would be impractical to identify detailed information pertaining to offerings in elementary agriculture of public schools in the different states. The examples noted herewith are adapted from several sources including the History of Agricultural Education of Less Than College Grade in the United States, by Stimson and Lathrop.

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[1] Ibid., p. 37.

[2] Ibid., p. 59.

[3] Dick J. Crosby, "Boys Agricultural Clubs," Yearbook Department of Agriculture, 1904, p. 489-496.

> Alabama: The first reported attempt to teach agriculture in the South was made by Booker T. Washington at Tuskegee in 1880. The legislature in 1903 passed an act providing for the teaching of agriculture in all public schools of less than 500 populations. Prior to passage of the Smith-Lever Act of 1914, education in agriculture for Negroes was centered in elementary schools with emphasis on corn and tomato clubs. (Reference to the establishment of Congressional District Schools in Alabama and other states is made under a separate heading.)
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> Arkansas: A total of 1632 students were studying elementary agriculture in 68 of the 93 state-aided schools in 1912. The General Assembly of 1911 authorized the state Board of Education to prepare courses of study for elementary and secondary schools of the state. A committee prepared a course in agriculture for elementary schools consisting of four divisions: (1) primary and first grades, (2) grades two, three and four, (3) grades five and six, (4) grades seven and eight.[1]
>
> California: In 1907 the state Legislature through Section 1665 of the Political Code required all elementary schools to "give instruction in nature study with special reference to agriculture".
>
> Colorado: Prior to passage of the Smith-Hughes Act, agriculture had been taught in the grades in 19 counties.
>
> Georgia: In 1903 the General Assembly enacted legislation which provided that agriculture be taught in the common public schools in the state. Agricultural club work was begun in Newton County during the school

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[1] Roy W. Roberts, Historical Development of Vocational Agricultural Education in Arkansas Public Schools, University of Arkansas Bulletin, 1941, p. 8-11.

year 1904-1905. (Notations regarding 4-H clubs and congressional schools are listed separately.)

Indiana: In 1903 corn-club work was started in three counties of the state. At about the same time classes in agriculture were organized in rural schools. In 1909 a textbook, Agriculture in the Common Schools, was published and widely used.

Iowa: Agriculture in the common and rural graded schools can be traced to P. G. Holden who came to the state in 1903 as a member of the teaching staff at Iowa State College, and later became state director of agricultural extension. He thereafter added A. V. Storm as extension specialist to work with schools. Instructional programs were developed under leadership of county superintendents and were centered around club work with corn or livestock projects.

Louisiana: In 1903 the state Board of Education took action to make the study of agriculture compulsory. However, legislative action wasn't enacted until 1910. In 1908, V. L. Roy, superintendent of Avoyelles Parish, organized the first corn club in the state. In 1909, Mr. Roy joined the staff at Louisiana State University where he promoted club work and supervised the teaching of agriculture in elementary and secondary schools. About 1908 there were eighteen teachers and supervisors of agriculture in Negro schools in the state.

Massachusetts: The General Court enacted a law in 1862, which is still operative, permitting local schools to provide agricultural instruction. Nature study was emphasized in Plymouth County in 1890. With support from the Massachusetts Horticulture Society the movement took the form of school gardens in cities and suburban areas. In the city of Worchester there were 600 gardens in 1909.

Michigan: The spread of nature study and school garden movements intensified the desire of farmers and friends of rural education to have instruction related to agriculture at least in the rural elementary schools. By 1906 some elementary agriculture was being taught in about 300 school districts. The annual report of the superintendent of public instruction for 1908-1909 showed approximately 1,000 rural schools in the state giving some instruction in agriculture.

Minnesota: The legislature of 1901 appropriated $4,000 for use by the Department of Agriculture of the University of Minnesota for preparing and distributing material to assist teachers and pupils in the study of agriculture, home economics and rural life.

Missouri: The Annual Report for the Public Schools of the State of Missouri shows agriculture as having been taught as a subject in 1905. The enrollment of pupils in agriculture was 1,116 in 1907 and 3,316 in 1910. The report for 1914 shows that agriculture was taught in the seventh and eighth grades of all rural schools.[1] School gardens were stressed, homework was correlated with instruction and participation in clubs was encouraged.

Nebraska: Nature study was taught regularly in elementary schools beginning in 1900. Early courses of study indicate that agriculture was given in the upper elementary grades. The value of instruction was dependent upon the ability, training and enterprise of the teacher.

New York: (See Nature Study p.64)

North Carolina: A study by Armstrong indicates that agriculture was taught in a number of public schools but was not very successful.[2] It was fairly popular at first—6,975 white children (elementary and secondary) were enrolled in 1903-1904. Thereafter, the number of pupils pursuing the course declined rapidly, not because such instruction was not essential but rather that teachers were not properly prepared

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[1] Missouri Department of Public Instruction, Report of the Public Schools of the State of Missouri, Ending June 30, 1914.

[2] Armstrong, op. cit., p. 71.

In an effort to overcome the difficulty, special training programs for teachers were set up in the summer session at North Carolina A & M College.

Ohio: One of the first secondary school agriculture courses in Ohio was organized at New Holland in 1907. In 1911 the legislature passed an act providing for the appointment by the state superintendent of public instruction of four supervisors of agricultural instruction in the schools of the state. The legislation further provided that the teaching of agriculture should be made mandatory in both high and elementary schools in rural and village school districts.

Oklahoma: When Oklahoma became a state in 1907 the legislature passed a law making it necessary that agriculture be offered in the common schools receiving state aid. Agriculture at the same time became a requirement for teacher certification. The requirement was continued until 1951.

Texas: In 1907 the legislature passed a bill requiring that elementary agriculture be taught in the public schools of the state, exempting only schools with a population of more than 300. Agriculture at the same time became a requirement for teacher certification. Apparently the act still stands.

Secondary Schools

It is not easy to trace the development of agricultural education in secondary schools due to the lack of distinction in early years between instruction in elementary and secondary schools, and between secondary and collegiate instruction. Much of the early instruction in agricultural colleges would be classified as secondary agriculture by present standards. We do know, however, that the movement for secondary instruction in agriculture developed rapidly after 1900. Prior to federal support in 1917, there was a lack of standardization in programs sponsored at local and state levels.

Several national agencies gave support to the development of instructional programs in agriculture in secondary schools. The Office of Experiment Stations in 1902 began to publish a section on the progress of secondary education in agriculture in its annual report and continued the practice for ten years. The work of the Office served as a clearing house for secondary education in agriculture.[1]

The Association of Land Grant Colleges and Universities devoted discussions to agricultural education for secondary schools at annual meetings. Special consideration was given to the professional preparation of teachers.

The Bureau of Education in the Department of Interior had specialists in rural or agricultural education for a number of years. Several of the publications of the Bureau dealt with agriculture in secondary schools. Certain of the publications are quoted in this chapter. Others are listed as Related References among Appendices to the report.

In 1907 the National Education Association authorized a department of rural and agricultural education which was organized the following year. The convention of 1908 gave unusual attention to vocational education and in 1909 much attention was given to agricultural education.[2] Previously, a national committee on agricultural education, organized in 1904, held meetings in connection with NEA conventions.

The American Association for the Advancement of Agricultural Teaching held annual meetings for a number of years beginning in 1910. Reports of the presentations in 1911 and 1912 are contained in the U. S. Bureau of Education Bulletin 1912, No. 6, and Bulletin 1913, No. 14. Among others, the contributors included D. J. Crosby, Specialist in Agricultural Education, U. S. Department of Agriculture; R. W. Stimson, State Board of Education for Massachusetts; A. V. Storm, Professor of Agricultural Education, Iowa State College.

In the spring of 1916 the Bureau of Education attempted to gather definite information concerning the teaching of agriculture in public high schools and in special agricultural schools of secondary grade. Certain of the data are shown herewith.[1]

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[1] True, _op. cit._, p. 330.

[2] _Ibid._, p. 335.

Agriculture in Secondary Schools, 1915-16

Number public high schools reporting teaching Agriculture
2,175

Number of persons teaching Agriculture 2,254
Male 2,007
Female 247

Number of students of secondary grade studying Agriculture
41,045

Boys 24,743
Girls 16,312

The data show that less than one per cent of the foregoing schools taught agriculture before 1900. Over 97.6 per cent introduced the subject after 1905.

Instruction in agriculture in secondary schools from 1900 to 1917 was projected through regular high schools and through special schools. The latter included: county schools of agriculture; congressional district schools; judicial district schools; and state schools of agriculture, some of which were known as Farm Life schools. A number of private schools also included offerings in agriculture. There were some special schools for Negroes, Indians, and a few for delinquents.

Examples of programs in regular high schools are deducted from several sources, including the History of Agricultural Education by Stimson and Lathrop.

Alabama: The state pioneered in the establishment of special agricultural schools in the South. (See separate heading, District Agricultural Schools.)

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[1] H. P. Barrows, Development of Agricultural Instruction in Secondary Schools, U. S. Bureau of Education, Bulletin 1919, No. 85, p. 13.

Arkansas: The General Assembly in 1909 passed a bill providing for the establishment and maintenance of four public schools in which agriculture, horticulture and textile manufacturing were to be taught. The schools, each comprising a district of 17 to 20 counties, were located at Jonesboro, Russellville, Magnolia and Monticello. The schools in the beginning provided three years of elementary courses and four years of high school work. All of these schools had discontinued instruction in elementary subjects by 1926 and high school subjects by 1936. Presently, there are degree granting state colleges at the four locations. The college at Jonesboro—Arkansas State University—also offers the Master's Degree.

California: The first programs of agriculture in California high schools were organized at Bakersfield in 1905-1906 and at the Garden School in Los Angeles in 1908. Both experimented with school farms as instructional devices. By 1916-1917, 93 of the 281 high schools in the state included agriculture in their offerings.[1]

Colorado: Prior to passage of the Smith-Hughes Act, 28 Colorado cities had agriculture courses. Agriculture was taught as a one-year course in the Longmont High School beginning in 1896.

Florida: Agriculture first appeared in secondary schools in 1884. In 1915-1916, 12 high schools had agriculture departments.

Georgia: The history of agricultural education began with settlement of the colony (page 21). Other pioneer programs involved the offering of agriculture in special schools, collaboration with other states in establishing congressional schools, and in organizing clubs for boys and girls enrolled in agriculture. Apparently, the first high school program in agriculture was that offered at Temple in 1903 and in a neighboring community at Euharlee about 1904. The Honorable Hoke Smith made land and equipment available for instructional purposes at both schools.

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[1] S. S. Sutherland, _Agricultural Education in the Secondary Schools of California_, University of California, Davis 1940, p. 4-5.

Idaho: There were only three high schools in the state when the College of Agriculture was established. The number increased thereafter as did offerings in agriculture. Seventy-three high schools were already teaching agriculture when Smith-Hughes funds became available for federal aid.

Illinois: The Agricultural Extension Service of the University of Illinois stimulated work in agricultural education in secondary schools during the first two decades of the century. Dean Eugene Davenport and Dr. A. W. Nolan, professor of agriculture, were among the leaders in the movement. Fifteen schools had organized programs by 1910 and the number increased to 88 by 1915. A methods course for training teachers of agriculture was organized by Dr. Nolan in 1912. He became the first supervisor and teacher trainer in Illinois under provisions of the Smith-Hughes Act in 1917.[1]

Indiana: The Indiana Vocational Education Act was approved by the General Assembly in 1913. Z. M. Smith was appointed as the state supervisor of agricultural education. He had been appointed state leader of 4-H Clubs during the previous years and held a combination position in the two areas until retirement in 1941. Seven departments of vocational agriculture, including one in the city of Indianapolis were in operation in 1915. The number increased to 32 during the school year 1916-1917. In addition to the state aided programs of vocational agriculture, approximately 400 high schools in Indiana offered academic instruction in agriculture in 1915.[1]

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[1] A. W. Nolan and C. A. Bell, A History of Agricultural Education of Less Than College Grade in Illinois, Bulletin No. 80, Illinois Board for Vocational Education, 1940, p. 5-10.

Iowa: Several factors contributed to the early teaching of agriculture in Iowa high schools. A position in agricultural education was established in the state college of agriculture. Support came from the State Teachers Association and the farm press. High schools with normal training departments and all consolidated schools were required to include agriculture among their offerings. The subject was introduced in one high school in 1904 and was included in offerings of 495 high schools in 1915.[2]

Kansas: Ninety-six Kansas high schools were offering agriculture in 1911.

Kentucky: Prior to 1913 county high schools in the state had been authorized by law to teach agriculture. The subject had been introduced in five schools by 1910. By 1916, the number was increased to 32, including three county high schools. Summer work was required in seven schools, home projects in six, and in 20 of the schools agriculture was required of all pupils.

Louisiana: In 1908 the Legislature of Louisiana passed a law for encouragement of teaching agriculture in the high schools. Schools maintaining an approved course were granted $500. The schools were later divided into two types. Schools of Type I were required to maintain from five to ten acres for practical instruction and were granted annually $1,200 of state money. Schools of Type II were not required to have land and were granted $400. There was a considerable number of Type I schools during the period of 1913 through 1917. There were not many Type II schools, however, until 1915-16.[1]

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[1] Z. M. Smith, Some Historical Data on Vocational Agricultural Education in Indiana, From 1913 to 1931, Bulletin 109, Indiana Department of Public Instruction, 1931, p. 50.

[2] A. H. Hausrath, A History of High School Agriculture in Iowa, Iowa State College, 1914, p. 11.

Maine: In 1907 the state legislature enacted an Industrial Education Act providing a subsidy of $250 to any academy maintaining a course in mechanical arts, domestic science or agriculture. The subsidy was increased to $500 in 1909. An agriculture course was inaugurated at Castine Normal School in 1908. In 1915 13 high schools and academies received aid.

Maryland: In 1906 the Board of Education approved agriculture as an elective course in county high schools. In 1909 the Sparks Agricultural High School was established in Baltimore County. The program appeared to have been rather successful from the beginning and was widely publicized. In the same year agriculture was made available to Negroes at Sandy Spring in Montgomery County. For the year 1915-1916 there were 21 schools offering agriculture with a total enrollment of 351 pupils.

Massachusetts: A privately operated farm and trade school was established near South Boston in 1833 and is still operating as a secondary preparatory school. The first state-aided agricultural school was established by Oliver Smith at Northhampton in 1908. The school has since been expanded to include additional technical offerings. (See page 41 for information regarding county agricultural schools.)

Michigan: In 1907 the state legislature passed an act which provided for the establishment of county schools of agriculture, manual training and domestic economy. The first school established under this act was at Menominee. Professor Walter H. French became head of a Department of Agricultural Education at Michigan Agricultural College in 1908 and was active in promoting the teaching of agriculture in public schools of the state.

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[1] J. H. Mitchell, Development of Vocational Agricultural Education in Louisiana, Doctorial Dissertation, University of Louisiana, 1959, p. 363.

By 1916, 63 high schools enrolled 2547 students in agricultural courses. A 1913 amendment to the 1907 Act authorized the establishment of county agricultural schools.

Minnesota: The Putman Law approved in April 1909 provided financial support for the teaching of agriculture in ten selected high schools. A suitable tract of not less than five acres, located within two miles of each school, was to be used for a school garden and "purposes of experiment and demonstration". The Act was amended in 1911 to include support for 20 additional schools. In 1911-1912 the quota of 30 schools was in operation under provisions of the combined acts. A Department of Agricultural Education was established in 1912 at the University of Minnesota to prepare teachers of agriculture. A. V. Storm of Iowa State College was secured to inaugurate the program.

Mississippi: A state law passed in 1908 permitted counties to establish agricultural high schools for which a tax not to exceed two mills might be levied. During the first year 15 counties had established schools under the law. Within two years the number was increased to 27, with a total enrollment of nearly 3,000 pupils, 1,600 of whom were boarders.

Missouri: By legislative enactment the ability to teach agriculture was included as one of the requirements in 1880 to obtain a first grade teaching certificate. In 1905 the number of students taking agriculture in Missouri was 1180. The number increased to 3316 by 1910.[1]

Montana: The Billings High School initiated a course in agriculture in 1907 as did the Fergus High School in 1910. By 1915-16 many of the high schools were teaching agriculture.[2]

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[1] Missouri Department of Public Instruction, Sixty-first Report of the Public Schools of the State of Missouri, School Year Ending June 30, 1910, p. 26.

[2] Stimson and Lathrop, op. cit., p. 270.

Nebraska: The Shumway Act passed in 1912 provided for state aid to high schools for the teaching of agriculture, manual training, and home economics. The Act called for the purchase or loan of a tract of land to be used for demonstrations or experimental purposes. In 1913, 20 high schools qualified as Shumway schools. H. E. Bradford, professor of agricultural education and principal of the University School of Agriculture, helped initiate the program, which was discontinued with passage of the federal Smith-Hughes Act in 1917.

New Hampshire: Agriculture was introduced about 1905 among offerings in vocational subjects at the Gilmanton Academy and at the Coe Academy. At the close of the school year in 1914, 24 public high schools offered courses in agriculture. The pupils engaged in raising crops, caring for animals, pruning fruit trees, and building green houses, poultry houses and barns. At the close of 1916, 30 schools were offering agriculture.

New Jersey: A vocational school law, passed by the legislature in 1913, included provisions for instruction in industrial subjects, agriculture and household arts. Atlantic County was the first county to establish a vocational school, under terms of the Act, in which agriculture was taught. Similar offerings were included in the Cape May County Vocational School established in 1915.

New York: F. W. Howe was appointed Supervisor of High School Vocational Agriculture in 1910 following enactment of state-aid legislation. During this first year of service, 17 vocational schools of agriculture were established. Mr. Howe was succeeded in 1912 by L. S. Hawkins, one of the pioneer teachers in the state. Other early teachers of agriculture included A. P. Williams and F. W. Lathrop, both of whom several years later became staff members for the Federal Board for Vocational Education. By the time of the passage of the Smith-Hughes Act more than 70 high schools employed teachers of agriculture. (See page 84 for report on State Schools of Agriculture in New York.)

North Carolina: The Farm Life Schools established in 1911 constituted the major development of Agricultural Education prior to enactment of the Vocational Education Act of 1917. In that year the state appropriated $25,000 per year to each of 10 selected counties for the establishment of such programs. A 1913 amendment permitted the organization of one or more Farm Life Schools in a county with existing high schools. By 1917, 21 Farm Life Schools had been established, some on a county basis. The legislation required that a farm with barns, animals and their equipment, in addition to adequate space for classrooms and supplies, be provided for instructional purposes.[1]

Ohio: In 1911 an act was passed by the legislature providing for the appointment by the State Superintendent of Public Instruction of four supervisors of agricultural instruction in the schools of the state. The legislation further provided that the teaching of agriculture should be made mandatory in both high and elementary schools in the rural and village school districts. Alfred Vivian, who was Dean of the Agricultural College at The Ohio State University from 1915 to 1932, is considered to be the "Father of Vocational Agriculture in Ohio".[2]

Oklahoma: (See reference, page 83 to Judicial District Schools.)

Pennsylvania: The School Code of 1911 made it compulsory to teach a year of agriculture in every rural high school. Ordinarily, the course was assigned to the science teacher, who had little training in agriculture. An act of 1913 provided more specifically for training in agriculture on a vocational basis. Five departments of agriculture were established in the fall of 1913. In 1915-1916 there were 18 schools receiving state aid for teaching agriculture.

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[1] Armstrong, op. cit., p. 97-100.

[2] Information supplied by Warren G. Weiler, November 10, 1968.

South Carolina: Some agriculture was taught in public high schools under local sponsorship from 1900-1914. In 1916 the legislature passed the Tool Act, providing funds for teaching agriculture in the public schools. In 1917 the legislation was amended under terms of the Smoak-Rector Act. The Act provided for a circuit or itinerant system of teaching. Pupils were 14 years of age or older and were often still enrolled in elementary grades. In the year beginning July 1, 1917, and before the state accepted provisions of the Smith-Hughes Act, Verd Peterson was employed to organize a program of vocational agriculture. Thirteen teachers of agriculture working in about 40 schools were employed during the year.[1]

Tennessee: Agriculture in secondary schools was first introduced in the private school at Lynnville in 1911. About the same time departments were organized in three high schools—E. W. Grove School in Henry County, Davidson County Central High School, and the Farragut High School.

Texas: A two-year noncollegiate course in agriculture was offered at the Agricultural and Mechanical College beginning in 1907-1908. There was no other agricultural work being done with rural boys and girls except in the elementary schools.

Utah: Agriculture was included among offerings of academies organized under sponsorship of the Latter Day Saints from 1875 to 1889. Only three high schools were established before 1900. By 1910-1912 high schools began to emphasize application of instruction in agriculture to home farms of the students. In a few districts home project work was an established practice by 1913.[2]

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[1] Verd Peterson, History of the Program of Vocational Agricultural Instruction in the Public Schools of South Carolina, 1917-1958, State Department of Education, p. 1-2.

[2] L. R. Humphreys, The Early Development of Vocational Education in Agriculture in Utah, State Department of Public Instruction, 1965, p. 26-30.

Vermont: A state school of agriculture established at Randolph in 1911 now operates as a technical institute. About the same time a school of agriculture was organized in connection with the Institute at Lyndonville. A state college has since replaced the Institute. The first high-school offering in agriculture was at Morrisville in 1911. Similar courses were established shortly thereafter at Bristol, Stowe and Vergennes. Courses in four additional schools were started in 1914.

Virginia: Legislation authorizing Congressional District schools was enacted in 1908. (See page 83.)

Washington: At least four high schools offered instruction in agriculture by 1910. During the school year 1913-1914 approximately 30 high schools offered similar courses. Because of inadequate funds the number thereafter dropped until federal assistance became available through the Act of 1917.

West Virginia: General Agriculture was taught in 39 high schools in 1911 and in at least 75 schools before giving way to vocational education in agriculture under the Smith-Hughes Act. The report of the State Supervisor of High Schools for 1911 makes reference to a course of study in agriculture prepared by A. W. Nolan, a member of the University staff in agricultural extension. His work established a pattern for institutes and farmers clubs promoted by the College of Agriculture.

Wisconsin: The teaching of agriculture in the high schools of Wisconsin began early in the twentieth century. The report of the State Department of Public Instruction for 1910 refers to four high schools maintaining departments of agriculture. The department at Marshall was the first in the state to establish a four-year program and was publicized extensively. In 1911 the legislature passed a bill giving state aid for departments of manual training, domestic science and agriculture. In 1912-13, eighteen high schools had agriculture departments, and in 1916 83 schools qualified for state aid for such programs.[1] (See County Schools of Agriculture p. 81 .)

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[1] L. M. Sasman, op. cit., p. 46.

Special Schools

As noted in a previous section of this report, a number of special schools of agriculture were developed following the Colonial period. Most of these ceased to exist after the land-grant colleges were established. However, certain types of the special schools continued operations from 1900 to 1917 and were supplemented by some additional schools during this period.

Characteristics of the special schools are quite diverse and difficult to classify. In the main they might be identified as, (1) county schools, (2) congressional district schools, (3) state schools, and (4) schools organized in connection with land-grant colleges.

County Schools. In Wisconsin, county schools of agriculture were established when it became apparent that a large proportion of farm boys were not being reached by the College of Agriculture through short courses and regular offerings. Two schools, one at Menominee in Dunn County and one at Wausau in Marathon County were organized in 1902 as a result of state legislation enacted in 1901. An amendment to the law passed in 1909, permitted the establishment of ten schools, but only eight were ever organized. The county schools in Wisconsin became less popular as rural high schools were organized and programs of vocational agriculture were started in the schools. Three of the county schools were still operating in 1940.[1]

In 1907 the Michigan legislature authorized the establishment of county schools of agriculture, manual training and domestic economy. The schools were to have a two-year course, including agriculture and related subjects, and at least 10 acres of land. The first school established under this act was at Menominee. It operated successfully for a number of years. The second school was located at Sault St. Marie.[2]

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[1] Ibid., p. 30-37.

[2] C. H. Robinson and F. B. Jenks, Agricultural Instruction in High Schools, U. S. Office of Education, Bulletin 1913, No. 6, p. 23-24.

The 1911 legislature in North Dakota provided for the establishment of county agricultural schools to be maintained jointly by the county and the state. The Walsh County School at Park River and the Benson County School at Maddock were approved in 1913 and later operated under provisions of the federal legislation in 1917.

Agricultural schools were established in the Massachusetts counties of Bristol and Essex in 1913, and Norfolk in 1916. Provisions for experience included school farms plus home projects. The county schools are still operating and require occupational experience on a full-time basis for four to five months during the growing season.[1]

Congressional Schools. Alabama pioneered in the establishment of special agricultural schools in the South. These schools known as Congressional District Agricultural Schools were authorized by the state legislature in 1889. The first schools of this type were at Athens and Abbeville. The number was later increased to eleven. A farm was operated at each of the schools. Dormitories for boarding students were built at four of the schools. In 1927 the state legislature passed a bill providing for a demonstration farm at each of the schools. The farms were later sold and all of the schools were then placed under local control with programs offered as vocational education in agriculture.

Dr. R. E. Commack, retired State Director for Vocational Education in Alabama, is of the impression that the district schools were most effective and that the type of leadership extended through the schools and in other early educational programs placed the state in a favorable educational position within the South.[2]

During 1907, eleven congressional district schools were organized in Georgia under local boards with provisions for supervision by the University of Georgia. A four-year curriculum of nine months each was maintained. By an act of the 1911-1912 General Assembly the name of the congressional schools was changed to "District Agricultural and Mechanical School". The 1913 enrollment in the schools consisted of 1025 boys and 416 girls. An agricultural school for Negroes, founded at Forsyth in 1902, became one of the units in the A and M School System in 1922.

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[1] Interview with Jesse Taft, April 26, 1968.

[2] Personal interview, July 8, 1968.

The A and M School movement in Georgia was looked upon with considerable interest by educators in other states. Colleges and universities sent committees to the state to observe the program. National educational organizations selected Atlanta for their annual meeting place in order to visit the congressional district schools.[1]

In 1932 all of the A and M Schools were taken over as a part of the reorganization program of the University of Georgia. Four of the schools were converted into general junior colleges and two were made into four-year teachers colleges within the system. Many persons destined to assume important roles in the development of vocational education in Georgia were products of the congressional schools.

By legislative enactment agricultural high schools were established in the ten congressional districts of Virginia in 1908. An additional school was established to accommodate irregular boundaries. The enactment called for a minimum of five acres of land to facilitate "demonstrations and extension work". Some of the units were boarding schools. Little attempt was made to provide guidance and practically all who expressed a desire to study agriculture were allowed to enroll. The use of the school farm gave way to the project idea where schools were reorganized under provisions of the Smith-Hughes Act in 1917.

A modification of the congressional district schools occurred in Oklahoma where the state in 1908 provided for the location of an agricultural school in each of the Supreme Court judicial districts. Four of the present state schools of agriculture were formerly judicial district schools. Two schools created by the 1908 act are no longer agricultural schools.

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[1] Wheeler, op. cit., Chapter IV, p. 48-72.

State Schools

Legislation in certain of the states, including New York, provided for the establishment of state schools of agriculture. In certain states, some legislative support was given to agricultural schools having other designations, including county schools, congressional and judicial district schools, farm life schools, and special schools of differing types.

In the state of New York terminal offerings in agriculture beyond high school are assigned to state schools of agriculture. During the period 1906-1913, special schools were authorized at Canton, Alfred, Morrisville, Cobleskill, Farmingdale, Long Island, and Delhi. Originally, the schools were open to anyone who could profit by the instruction. Later, graduation from high school or the equivalent was required for admission. At the time of establishment, administrative responsibility was assigned to boards of trustees. In 1918 the state schools of agriculture were placed under the general jurisdiction of the State Department of Education. The colleges became part of the State University of New York in 1946 and are now designated as Agricultural and Technical Colleges. Major offerings of the colleges are noted herewith.

Alfred - Agricultural Business, Agricultural Engineering

Canton - Agricultural Business, Agricultural Technology

Cobleskill - Agricultural Business, Ornamental Horticulture, Dairy Technology, Agricultural Engineering

Delhi - Agricultural Business, Animal Husbandry including short courses in horseshoeing, small animals, and training of veterinarian assistants

Farmingdale - Ornamental Horticulture, Food Technology, Animal and Poultry Science

Morrisville - Agricultural Engineering, Agricultural Business, Conservation and Food Technology

In addition to credit courses the Agricultural and Technical Colleges of the State University of New York operate short courses and special training programs for adults which are of vital service to the areas in which the colleges are located.[1]

Schools Sponsored by State Universities

Reference was made in a previous section to the secondary school of agriculture established in 1888 at the University of Minnesota in connection with the Department of Agriculture. (p.53) Similar schools, but located off campus, were established as branches of the University at Crookson in 1905, Morris in 1910, Grand Rapids in 1921 and Waseca in 1949.[2]

A pattern similar to that of Minnesota was followed at the University of Nebraska where a school of agriculture, of high school grade with a six-months term, opened its doors in 1895. (p.53) By legislative enactment a second school of agriculture was established in 1913 at Curtis, a small town in the sandhills of west-central Nebraska. Administratively, the school operated as a branch of the college of agriculture and was patterned originally after the school of agriculture located on the Lincoln campus. (p.[illegible])

A school of agriculture at Ft. Collins, Colorado, was opened in 1890-1891 as an adjunct to the State College of Agriculture. A branch of the college offering instruction similar to the school at Ft. Collins was established at Ft. Lewis in 1911. No agriculture of less than college grade has been offered at Ft. Collins since 1927 nor at Ft. Lewis since 1929.[3]

In 1901 the California legislature passed an act establishing a Polytechnic School at San Luis Obispo, which was opened for instruction two years later as a vocational school to teach agriculture, mechanic arts, commercial and household arts. This school became the first public institution outside of the University of California to offer instruction in agriculture, and the first to teach the subject at the secondary level.[1]

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[1] Based on interviews with Mr. Norman Foote, Professor of Agriculture at Farmingdale, November 14 and with Dr. Harold Noakes, New York State Department of Education, November 15, 1968.

[2] Boss, _op_. _cit_., p. 33.

[3] Stimson and Lathrop, _op_. _cit_., p. 72-73.

Other Secondary Institutions Giving Instruction In Agriculture

It was not within the scope of this study to check in detail on offerings in agriculture of the secondary education level in areas other than public education. It is recognized, however, that offerings in private schools preceded offerings in public education. It is also recognized that agriculture has been included in offerings for special groups including Negroes, Indians, and in schools for delinquents. The Office of Education Bulletin 1917, No. 34 carries listings of Institutions in Agriculture, 1915-1916.[2] Included among the listings, other than in public-supported institutions, are:

- Private secondary schools teaching agriculture
- Private agricultural schools
- Secondary and high schools for Negroes (not including public high schools) teaching agriculture
- Institutions for juvenile delinquents teaching agriculture

(Note: A chapter on Vocational Education in Agriculture for Indian Schools is included in the Stimson and Lathrop *History of Agricultural Education*.)

Boys and Girls Clubs

The utilization of clubs to facilitate early agricultural instruction in elementary and secondary schools was a logical development. In documenting the nature study movement Bailey makes a case for experience teaching.[1] The organization of clubs as teaching devices in elementary schools became conspicuous as laboratory work in the teaching of gardening. Club work was associated with home projects in teaching production aspects of crop and livestock enterprises in early offerings of agriculture in elementary and secondary schools.

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[1] Sutherland, *op. cit.*, p. 3.

[2] A. C. Monahan and C. H. Dye, *Institutions in the United States Giving Instruction in Agriculture*, U. S. Bureau of Education, Bulletin 1917, No. 34, 115 p.

A Department of Interior Bulletin issued in 1905 indicates that there were 486 "junior naturalists" clubs in the state of New York in 1905.[2] The publication also refers to the role of county superintendents in promoting boys agriculture clubs as promotional devices for teaching of agriculture in a number of states including Illinois, Indiana, Iowa, Kansas, Nebraska, Ohio and Texas.[3] According to True, the movement for agricultural clubs for boys was started in 1900 when the President of the Farmers Institute in Macoupin County, Illinois, distributed selected seed corn to 500 boys. In 1904, 800 Illinois boys grew corn for prizes and 1250 exhibits of their work received awards at the St. Louis Exposition.[4]

In Ohio A. P. Graham, the Superintendent of Schools at Springfield, began to organize boys clubs in 1902. When he was made Superintendent of Extension Work in 1905 at the Ohio State University, about 3000 pupils in rural schools were members of these clubs.[5]

In 1908 clubs began to be organized in connection with the Farmers Cooperative Demonstration Work in the southern states under the direction of Seman A. Knapp. In 1909 more than 10,000 boys participated in corn clubs and in 1910 over

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[1] Bailey, op. cit., p. 468.

[2] Jewell, op. cit., p. 17.

[3] Ibid., p. 60.

[4] True, op. cit., p. 373.

[5] Ibid., p. 393.

46,000 boys were connected with the clubs.[1]

Club Work in Georgia

After the Georgia Legislature in 1903 made the teaching of agriculture compulsory, the county school commissioners and other school people inaugurated the "Agricultural Club" as a means of stimulating the teaching of agriculture. In commenting on the legislation Wheeler states, "The schools of the state accepted the club work as a method of teaching agriculture to farm boys and girls in compliance with the Act of the General Assembly of 1903 and generally set themselves to the task of bringing this method into common use throughout the state.[2]

Mr. C. C. Adams, the School Commissioner for Newton County, organized the first agricultural clubs in the state during the school year 1904-1905. A report issued in December 1906 shows that 20 county commissioners organized movements in their counties with emphasis on corn and cotton clubs.[3]

In 1905 Seman Knapp visited Georgia and studied the work carried on in Newton County by Mr. Adams. From 1905 to 1909, the club work was coordinated in the state by Dr. J. S. Stewart, Professor of Secondary Education at the University of Georgia. A special state agent for Boys' Agricultural Extension Work was appointed in the College of Agriculture in 1910. "This change in institutional relationships was the first step in disassociating the club movement from the public schools.[4]

Teacher Education

As an introductory to a book on teacher education in agriculture, Martin states, "The first two decades of this century are regarded as the formative years of teacher education in agriculture."[1] The teaching of agriculture in elementary schools reached a peak about the end of the first decade. By 1910 the establishment of public high schools was well under way with agriculture included among offerings in many rural and in some urban communities. A release by the Bureau of Education reveals that 2,175 public high schools reported the teaching of agriculture in 1915-1916. Only one half of the persons teaching agriculture in the secondary schools during the year had any special training in agriculture.[2]

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[1] Ibid., p. 394.

[2] Wheeler, op. cit., p. 36.

[3] Ibid., p. 34.

[4] Ibid., p. 40.

With the expansion of agricultural offerings in elementary and secondary schools, the training of teachers became a major problem. In 1907 Crosby indicated that the movement had gained momentum so rapidly that qualified teachers nowhere near filled the demand.[3] Agricultural colleges and larger high schools were more successful in obtaining personnel trained in agriculture than were the normal schools, in which fully 70 per cent of the teachers of agriculture were trained to teach subjects other than agriculture.[4]

In his reference to the status of secondary education in agriculture in 1916, True indicated that the movement had, "far outrun the ability of the colleges and normal schools to supply an adequate number of teachers trained in agriculture".[5]

Crosby classified the educational institutions offering training for teachers of agriculture in 1907 as: (1) State agricultural colleges, (2) State normal schools, (3) Denominational colleges and private schools, and (4) County normal training schools.[1]

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[1] W. Howard Martin, "Development of Teacher Education in Agriculture," Teacher Education in Agriculture, The Interstate Printers and Publishers, 1967, p. 2.

[2] Barrows, op. cit., p. 13.

[3] Dick J. Crosby, "Training Courses for Teachers of Agriculture," Yearbook of the Department of Agriculture, 1907, p. 208.

[4] Ibid., p. 207.

[5] True, op. cit. p. 356.

In 1907 the Office of Experiment Stations reported that departments of education, in which attention was given to the training of teachers, were maintained in land-grant institutions in Illinois, Missouri and Washington, and in normal schools in 12 states. Summer sessions for teachers were maintained in 13 states.[2]

Effective training programs for training Negro teachers of agriculture were provided in 1907 by Hampton Institute in Virginia, Lincoln Institute in Missouri and also by the schools at Orangeburg, South Carolina and Prairie View, Texas.[3]

At best the early training programs for teachers were quite inadequate. Graduates from agricultural colleges received but little if any training in professional courses, whereas persons enrolled in normal schools received little if any training in technical agriculture.

The Nelson Amendment of 1907 to the Morrill Act of 1862 gave land-grant colleges permission to use a portion of the appropriated funds for the training of teachers of agriculture and mechanic arts. It is obvious that institutions in only a few of the states took advantage of the Nelson Act and that the lack of implementation contributed to passage of the Smith-Hughes Act in 1917. Only 19 of the land-grant colleges reported the training of white teachers and none for the training of Negro teachers prior to 1917.[4]

The Massachusetts Agricultural College established a Department of Agricultural Education in 1907. Departments were organized shortly thereafter at Michigan State College (1908), Iowa State College (1911), and the University of Minnesota (1912).[1]

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[1] Crosby, op. cit., p. 208.

[2] True, op. cit., p. 272.

[3] Crosby, op. cit., p. 2210-11.

[4] Stimson and Lathrop, op. cit. p. 516.

Federal Legislation

This section of the report deals with legislative activities culminating with passage of the Smith-Hughes Act in 1917. Activities of several organizations and committees are itemized in some detail. References are made also to the Nelson Amendment of 1907 to the Second Morrill Act, and to the Smith-Lever Act of 1914—acts which preceded enactment of federal legislation for vocational education. Notations regarding the Land-Grant and Homestead Acts of 1862 are included in a previous section of the report.

Nelson Act

The Nelson Amendment to the Second Morrill Act of 1890, signed by President Roosevelt, March 4, 1907, and effective for the year ended June 30, 1908, increased appropriations to the several states and territories for the support of the colleges of agriculture. The amendment carried a proviso, "That said colleges may use a portion of this money for providing courses for special preparation of instructors for teaching the elements of agriculture and mechanic arts."[2] In hearings pertaining to the Nelson bill much stress was laid on the development of secondary education in agriculture and the need of training teachers for such work. Passage of the measure hastened interest of land-grant colleges in establishing teacher education courses, but the amount of the Nelson fund devoted to this purpose was quite small.[3] In commenting on the significance of the foregoing bill Blaugh states, "For several reasons the Nelson Amendment is significant in the movement to extend federal aid for vocational education. The dispatch with which it was passed by

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[1] G. L. O'Kelley, Jr., "Programs of Teacher Education in Agriculture," _Teacher Education in Agriculture_, Interstate Printers and Publishers, 1967, p. 31.

[2] 34 Stat. L. 1281.

[3] True, _op. cit._, p. 273.

Congress indicated the popularity and political strength of the land-grant colleges. There was clearly evidenced among these colleges desire to have a prominent part in developing secondary vocational education.[1]

Background of Legislation for Extension Work and Vocational Education

The background for agricultural extension work and for the teaching of agriculture are somewhat compatible. A. C. True credits the beginning of extension work to activities of early agricultural societies from the time the Philadelphia Society was organized in 1785.[2] The first school devoted exclusively to agriculture was established in 1821 at the Gardiner Lyceum in Maine.[3]

The agitation for federal support for extension work and vocational instruction in agriculture gained momentum shortly after 1900. The movement which preceded passage of the Smith-Hughes Vocational Education Act "may be said to have begun on February 21, 1906, when Ernest M. Pollard, of Nebraska introduced in the House of Representatives a bill to grant aid to normal schools".[4] A similar bill was introduced the next day in the Senate by Elmer J. Burkett of Nebraska.

In 1907 Representative Charles R. Davis, of Minnesota, introduced his first bill for federal aid for vocational education. The bill proposed to allocate funds for the teaching of agriculture and home economics in districts of not less than 10 counties, and for teaching of mechanic arts and home economics in urban schools. Branch experiment stations were to be supported at the schools.[1] In 1909 an amended bill introduced by Mr. Davis, added proposed support for the teaching of agriculture, home economics, and mechanic arts in public normal schools.

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[1] Lloyd E. Blaugh, Federal Aid in Agricultural Extension Work, Vocational Education and Vocational Rehabilitation, U. S. Office of Education Bulletin, 1933, No. 15, 1935, p. 51.

[2] A. C. True, A History of Agricultural Extension Work in the United States, 1785-1923, U. S. Department of Agriculture, Miscellaneous Publication, No. 15, 1928, p. 3.

[3] True, History of Agricultural Education, op. cit., p. 35.

[4] Ibid., p. 362.

In 1910 Dolliver of Iowa introduced a bill in the Senate, which was somewhat similar to the Davis bills. His revision provided for payment of lump sums to the states, and was supported by the American Federation of Labor. Soon thereafter Mr. Davis introduced the revised bill in the House.

In 1908 a committee of the Association of American Agricultural Colleges and Experiment Station, requested legislation to foster extension work. A bill was introduced by Representative McLaughlin of Michigan in December, 1909. Early in the following January, Senator Dolliver presented the bill in the Senate along with his bill for vocational education.[2]

In March, 1911, Senator Carroll S. Page of Vermont introduced a bill proposing appropriations for: (1) Instruction in trades and industries, home economics, and agriculture in public secondary schools, (2) Instruction in agriculture and home economics in state district agricultural schools of secondary grade, (3) Agricultural experiment stations at the agricultural high schools, (4) Extension departments at land-grant colleges or state departments of agriculture, and (5) Instruction in agriculture trades and industries, and home economics in normal schools. A substitute Page bill which eliminated support for branch experiment stations was presented in June 1912.

Smith-Lever Act

After the election of 1912, Senator Hoke Smith of Georgia became chairman of the Committee on Education and Labor. He was also retained on the Committee on Agriculture and Forestry. In the House, Representative Lever of South

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[1] Ibid., p. 363.

[2] Blaugh, op. cit., p. 62.

Carolina was chairman of the Committee on Agriculture, and Representative Hughes of Georgia was chairman of the Committee on Education. By agreement it was decided to push the extension and vocational educational bills simultaneously, but to keep them separated and not confuse the issues.[1]

The Page bill was again introduced in 1913. Strong opposition developed to the uniting of appropriations for agricultural extension work and vocational education. A resolution to create a commission to study the situation with regard to vocational education and make recommendations concerning the problems of federal aid was favorably received by Congress and in effect "was practically substituted" for the Page bill.[2] The resolution to establish a Commission on National Aid to Vocational Education was presented by Senator Hoke Smith following passage of the Smith-Lever Act. The resolution was signed by the President on January 20, 1914.

The Lever extension bill was passed by the House on January 19, 1914. It was later substituted for the Smith bill and approved by the Senate on February 7, 1914. After a conference report on House and Senate amendments was approved, the bill was signed by President Wilson May 8, 1914.

The Smith-Lever Act provided:[3]

> That extension work in agriculture and home economics should be carried on by the Land Grant Colleges in cooperation with the United States Department of Agriculture (Sec. 1).
>
> That extension work should consist of giving instruction and practical demonstrations to persons not attending or resident in a land-grant college (Sec. 2).

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[1] George A. Works and Barton Morgan, _The Land Grant Colleges_, Staff Study No. 10, Prepared for the Advisory Committee on Education, 1939, p. 50.

[2] True, _op. cit._, p. 365.

[3] 38 Stat. L. 372-5 (1914).

Evolution of the Smith-Hughes Act

Support for federal legislation for vocational education gained momentum with enactment of the Smith-Lever Act and appointment of the Commission on National Aid to Vocational Education in 1914. To understand the significance of the movement some documentation is made of background activities and events in addition to the notations previously cited in support of federal aid for agricultural extension and vocational education. (page 92).

Douglas Commission

In 1905 the Massachusetts Legislature authorized Governor, William L. Douglas, to appoint a Commission to "investigate educational needs for different grades of skill and responsibility of various industries in the commonwealth".

The Commission submitted its report in 1906 and recommended:

1. "That cities and towns so modify the work in the elementary schools as to include for boys and girls instruction and practice in the elements of productive industry, including agriculture and the mechanic and domestic arts, and that the instruction in mathematics, the sciences, and drawing should show the application and use of these subjects in industrial life."

2. That all "towns and cities provide, by new elective industrial courses in high schools, instruction in the principles of agriculture and the domestic and mechanic arts; that, in addition to day courses, cities and towns provide evening courses for persons already employed in trades; and that provision be made for instruction in part-time day classes of children between the ages of 14 and 18 years who may be employed during the remainder of the day".[1]

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[1] Massachusetts Commission on Industrial and Technical Education, Report of the Commission, Boston, 1906, p. 20.

The Commission concluded its report with the recommendation that an administrative commission should be created to carry out the recommendations contained in the report. The General Assembly of 1906 authorized creation of the second commission composed of one person from each of five occupational groups—education, business, labor, agriculture, and homemaking. From 1906 to 1909 the new commission assisted in the establishment of sixteen evening and four day-vocational schools in industry, agriculture and homemaking. The day school in agriculture, carpentry and domestic science organized in 1908 under direction of R. W. Stimson has remained in continuous existence and is the oldest state-aided day vocational school in Massachusetts. In 1909, the work of the Commission was taken over by the Massachusetts Board of Education. David Snedden of Columbia University became Commissioner of Education and Charles A. Prosser was appointed Deputy Commissioner in charge of vocational education.[1]

National Society for Promotion of Industrial Education

By 1906 the shortage of skilled industrial workers had become critical. While many thought the manual training movement would meet the needs of industry, it became evident that it could not be the means of supplying industry with trained workers.[2]

The first report of the Massachusetts Commission created widespread interest in providing a more adequate program of vocational education. The report undoubtedly helped stimulate the organization of the National Society for the Promotion of Industrial Education. In the spring of 1906, Charles R. Richards, Professor of Manual Training, Columbia University and James P. Haney, Director of Art and Manual Training, New York City schools called a meeting, attended by thirteen men, to discuss the problem of supplying industry with trained workers. A second meeting was planned for

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[1] Stimson and Lathrop, _op_. _cit_., p. 191.

[2] Arthur B. Mays, "Fifty Years of Progress in Vocational and Practical Arts Education," _American Vocational Journal_, 21:29-38, December, 1936.

November 16 of the same year. At this meeting, which was attended by about 250 persons, the National Society was organized.[1]

The new Society was especially interested in groups which would benefit from industrial education, including employers, employees, and educators.[2]

Eleven annual conventions were held in major cities by the Society. The programs included prominent speakers from industry, labor and education. Major surveys were conducted, and a number of bulletins were published, including proceeding of the annual meetings.

The new Society was destined to assume an important role on the thinking of the country on national legislation for industrial education as well as the final passage of the Smith-Hughes Act. It was instrumental in securing the appointment of the Commission on National Aid to Vocational Education.[3]

The work of Dr. C. A. Prosser, who served as secretary of the Society from 1912 to 1915, was quite influential as related to the federal legislation, along with responsibilities for directing studies and editing publications.[4]

Agricultural Agencies

Prior to 1917 several agencies and organizations in agriculture became involved in educational activities which gave evidence of the need for vocational training. Beginning in 1902 the Office of Experiment Stations included a section on secondary education in its annual report. The practice was continued for 10 years. In 1905, a department on agricultural education was established in the Experiment Station Record. Among the special publications issued by the Office were those on the American system of agricultural education, secondary courses in agronomy and animal husbandry, training courses for teachers of agriculture, and home projects in secondary agriculture.[1]

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[1] Ibid., p. 30.

[2] Carl L. Bartel, Origin, Development and Work of the American Vocational Association, Doctoral Dissertation, 1959, University of Missouri, p. 84-85.

[3] Ibid., p. 86.

[4] Ibid., p. 87.

The American Association of Agricultural Colleges and Experiment Stations included discussions on secondary agriculture at their annual meetings. In 1902 a report of the committee on teaching agriculture contained a section on courses in agriculture for secondary schools. In 1907 the committee's syllabus on secondary agronomy was published as a circular of the Office of Experiment Stations.[2]

In 1905 the Association appointed a standing committee on agriculture and mechanic arts with the Director of the Office of Experiment Stations as chairman, and D. J. Crosby, a member of his staff, as secretary. The activities of the committee within the land-grant colleges contributed to the establishment of a department of rural and agricultural education in the National Education Association. C. H. Lane reported that the work of the committee from 1905 to 1917 was quite outstanding.[3]

National Education Association

Interest of the National Education Association in vocational education was manifested in several ways. A department of rural education was established in 1907. The convention in 1908 gave unusual attention to vocational education and in 1909 much interest was centered on the organization of special agricultural schools.[4] In 1912 the

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[1] True, op. cit., p. 330.

[2] Ibid., p. 331-332.

[3] Stimson and Lathrop, op. cit., p. 570-573.

[4] True, op. cit., p. 334-335.

Association created a committee of educators, employees, and social workers to study the needs of adolescents for vocational guidance and education.[1]

American Federation of Labor

In 1907 the American Federation of Labor adopted a resolution favoring industrial and technical education and in 1908 created a study committee, which reported in favor of such education under public control and with federal aid. The committee found "sufficient proof that the right kind of education for a boy or girl who expects to enter upon a vocational career is second only to their having an education at all.[2]

Although opposed to narrow training the American Association of Labor worked quite closely on legislative matters with the National Society for the promotion of Industrial Education and gave support to the Page bills for vocational education. Labor followed developments of vocational legislation up to passage of the Smith-Hughes Act. Arthur E. Holder, the AFL legislative representative, participated in activities pertaining to vocational education; and when the Federal Board for Vocational Education was established in 1917, was named labor's representative on the Board.[3]

Other Organizations

In their book, Development of Vocational Education, Hawkins, Prosser and Wright state that "Newspapers and journals of the early 1900's fairly teemed with editorials and signed articles indicating an overwhelming sentiment in favor of enlarging and extending the scope of education" to include "training of the great mass of workers for wage earning occupations of every kind"[4] National organizations of various kinds including those previously cited immediately preceding, gave their support to efforts to secure National grants for vocational education.

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[1] Ibid., p. 357.

[2] Melvin L. Barlow, History of Industrial Education in the United States, Chas. A. Bennett Co., Inc., 1967, p. 376.

[3] Ibid., p. 38.

[4] Hawkins, Prosser and Wright, op. cit., p. 50.

In 1912 the American Association of Manufacturers pledged support to a number of principles of educational betterment considered "essential to society and to the spiritual, social, and physical welfare of youth". A resolution stated: "The imperative need of the industrial workers and employers of the country is that thoroughgoing systems of industrial education be everywhere established, so that our factories may be constantly better utilized; that standards of skill and output may continually be improved; and that foreign and domestic markets may be better held and extended."[1]

The United States Chamber of Commerce took an active interest in the drive to secure federal funds in support of vocational education. In February, 1916, its education committee made a favorable report on the Smith-Hughes bill before Congress and recommended that a referendum pertaining to certain aspects of the Act be conducted among affiliated groups. The replies published in June indicated favorable responses to the allocation of funds to the states on a uniform basis; to the creation of a representative and compensated board to administer the act; and to the appointment of advisory committees by the Federal Board to represent industry, commerce, labor, agriculture, homemaking and general or vocational education.

The endorsement by the Chamber of Commerce became a mandate which influenced the Congress in deliberations pertaining to the Act.

Several agricultural groups, in addition to the Office of Experiment Stations and the affiliated Association of Agricultural Colleges, were active in the support of vocational education. Organizations directly identified with agricultural education are noted herewith.

American Society of Equity

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[1] _Ibid_., p. 52.

National Farmers' Grange
National Farmers' Congress
National Committee on Agricultural Education
American Education and Cooperative Union

Early State Legislation

Following recommendations laid down in the Douglas Commission, Massassachusetts became the first state in 1906 to establish a system of public vocational education. Following the work of similar commissions, several other states including Connecticut, New Jersey, Wisconsin, and Indiana established state systems from 1906 to 1911. In addition, state programs were started in New York and Ohio without benefit of commission reports.

The Massassachusetts Act of 1906 authorized cities and towns to provide independent schools for instruction in agriculture and the mechanical and industrial arts and to establish part-time classes in the schools. Evening courses in the trades were also authorized.

In Wisconsin a law was enacted in 1907 requiring cities and school districts to establish and maintain trade schools. In Connecticut an act of 1909 provided for a state system of trade schools to be administered by the State Board of Education.

A state-aided system of vocational schools was established in New York in 1910. Later laws provided for extension of grants to include part-time, continuation, and evening schools in addition to the day schools giving instruction in agriculture, home economics, and trades and industries.

Legislation enacted in Rhode Island in 1912 authorized state aid for instruction in agriculture and training in the mechanical and industrial arts.

Enabling legislation for vocational education was enacted during 1913 in Indiana, Pennsylvania and New Jersey. The Indiana program provided for state aid for training in industries, agriculture and domestic science, through all-day, part-time-continuation, and evening schools. The legislative provisions in Pennsylvania and New Jersey were similar to that of the Indiana Act.

Commission on National Aid to Vocational Education

When it became evident that Congress would not combine appropriations for agricultural extension and agricultural education in one bill, the National Society for the Promotion of Industrial Education urged support of a national commission on vocational education. The commission created by an act of Congress and approved January 20, 1914, was "to consider the subject of national aid for vocational education, and to report findings and recommendations not later than June first, nineteen hundred and fourteen."[1] The resolution provided for the appointment by the President of nine members to the commission. The appointments included:

Senator Hoke Smith, Georgia

Senator Carroll S. Page, Vermont

Representative Dudley M. Hughes, Georgia

Representative S. D. Fess, Ohio

Miss Florence M. Marshall, Director, Manhattan Trade School, New York

Miss Agnes Nestor, President, Internation Glove Worker Union, Chicago

Charles A. Prosser, Secretary, National Society for Promotion of Vocational Education

Charles H. Winslow, Special Agent, Bureau of Labor Statistics, Washington, D. C.

John A. Lapp, Director, Indiana Bureau of Legislation Information

The Congressional members of the commission had all declared themselves in favor of federal aid for vocational education. The lay persons were members of the National Society for the Promotion of Vocation Education, implying a friendly attitude toward such aid.[1]

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[1] Blaugh, _op_. _cit_., p. 97.

Enactment of the Smith-Lever Act enabled the commission to confine its investigation to the field of secondary school education. The commission decided at the outset to address itself to the following questions:[2]

1. To what extent is there a need for vocational education in the United States?

2. Is there a need for national grants stimulating the States to give vocational education?

3. What kinds or forms of vocational education should be stimulated by national grants?

4. How far can the Federal Government aid through expert knowledge vocational education in the various states?

5. To what extent should the Federal Government aid the States through national grants for vocational education?

6. Under what conditions should grants to the States for vocational education be made?

The question of national grants to the States occupied the largest part of the time and attention of the commission. Information was obtained through hearings and conferences held at Washington; through questionaires sent to state, city, and county superintendents of public instruction, and to national organizations of labor and to representative employees. Literature was collated and studied as far as possible.[3]

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[1] _Ibid_., p. 97.

[2] Commission on National Aid for Vocational Education, _Report of the Commission_, 63rd Congress, 2nd Session, H. Doc. 1004, Vol. 1, p. 10.

[3] True, _op_. _cit_., p. 366.

The work of the commission was delimited by deletion of items pertaining to extension education which were carried in vocational bills prior to passage of the Smith-Lever Act. Also, because of previous activities, all members of the commission were quite familiar with legislative proposals for vocational education, thus eliminating the need for exploring basic issues.

The final report of the commission consisted of two volumes. The first volume included a summary of findings and recommendations, and seven chapters pertaining to major issues, namely:[1]

1. Need for vocational education
2. Need for national grants to the states for vocational education
3. Kinds of vocational education for which national grants should be given
4. Aid to vocational education through federal agencies
5. Extent to which the National Government should aid vocational education
6. Conditions under which the grants for vocational education should be given
7. Proposed legislation.

A number of appendices were attached to Volume 1, including sections on vocational education in Germany, replies to questionnaires, and a selected bibliography on vocational education and related topics. The second volume included transcriptions of hearings before the commission with federal departments, and with individuals and national organizations. Copies of statements received by letter were also made a part of the volume.

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[1] Ibid., p. 4-5.

The recommendations of the commission, as embodied in the proposed legislation are summarized in the report.[1]

1. That national grants be given to the States for the purpose of stimulating vocational education in agriculture and in the trades and industries.

2. That grants be given in two forms:

    (a) for the training of teachers of agricultural, trade and industrial, and home economics subjects.

    (b) for the paying of part of the salaries of teachers, supervisors, and directors of agricultural subjects and of teachers of trade and industrial subjects.

3. That appropriations be made to a federal board for making studies and investigations which shall be of use in vocational schools.

The work and report of the Commission on National Aid to Vocational Education was favorably received by individuals and organizations interested in vocational education, as attested by the following statements:

> "Most gratifying of all concerned was the fact that in less than 60 days, the Commission had produced a two-volume report of 500 pages. It covered virtually every phase of the many problems involved in a comprehensive study of national aid to the states for the new education."[2] "The report of the Presidential Commission became a source book for future reference; it may well be considered a classic in the literature of vocational education."[3]

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[1] *Ibid*., p. 14.

[2] Hawkins, Prosser and Wright, *op*. *cit*., p. 82.

[3] Barlow, *op*. *cit*., p. 61.

"As a statement of contemporary thought on vocational education and because of its heavy influence on subsequent legislation, this document deserves close attention. It is the Magna Carta of vocational education in the United States."[1]

Smith-Hughes Act

The report of the Commission on National Aid to Vocational Education was printed and widely circulated but it was though best not to press for passage of the proposed legislation at the short session of the Sixty-third Congress beginning in December 1914.[2]

The vocational bill was introduced in the Senate by Hoke Smith, December 7, and in the House by Representative D. M. Hughes, December 19, 1915. It was reported favorably in the Senate January 31, 1916, and in the House February, 10, 1916. The bill, thereafter, passed the Senate unanimously July 6, 1916. In the House the bill was held over until the short session. Both bills carried amendments relating to composition of boards for administering the act. Largely through influence of the General Federation of Women's Clubs, the House bill carried a provision, which the Senate later accepted, that 20 per cent of the money for payment of salaries for teachers of trades, home economics, and industrial subjects might be expended for salaries of teachers of home economics.

President Wilson was strong in his support of federal legislation for vocational education. In his annual address to Congress on December 15, 1915, he stressed the preparedness program and the need for industrial, vocational and agricultural training, and that the industries and resources of the country should be made available for mobilization. On January 27, 1916, the President made a second preparedness statement in an address to Congress.

In the annual address to Congress in December 5, 1916, President Wilson said:

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[1] Grant Venn, _op_. _cit_., p. 57.

[2] True, _op_. _cit_., p. 368.

> "At the last session of the Congress a bill was passed by the Senate which provides for the promotion of vocational and industrial education which is of vital importance to the whole country, because it concerns a matter, too long neglected, upon which the thorough industrial preparation of the country for the critical years of economic development immediately ahead of us in very large measure depends. May I not urge its early and favorable consideration by the House of Representatives and its early enactment into law? It contains plans which effect all interests and all parts of the country, and I am sure that there is no legislation now pending before the Congress whose passage the country awaits with more thoughtful approval of greater impatience to see a great and admirable thing set in the way of being done."[1]

Support for the new legislation had crystalized throughout the country prior to issuance of the mandate by President Wilson. Strong support for implementing the 1914 recommendations of the National Commission, were forthcoming from national organizations, including the National Society for the Promotion of Industrial Education, the National Education Association, the American Federation of Labor, and the United States Chamber of Commerce.

The vocational bill passed the House January 9, 1917. After differences between the Senate and House bills were resolved, final legislative action was completed February 17. The bill became law with approval by President Wilson February 23, 1917, two months before entry of the United States in World War I.[2]

The passage of the Smith-Hughes Act created a system of vocational education in connection with the public schools in the United States. It provided funds on an increasing basis to the States for developing and expanding vocational programs. "It then remained for the states and local communities with or without federal assistance," to increase the strength and scope of vocational education to meet the development of the various local vocations.[1]

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[1] Cong. Rec., 54:17.

[2] Public Law 347, 64th Congress.

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[1] True, *op. cit.*, p. 370.

CHAPTER VI
REACTIONS OF EARLY LEADERS

The planned procedures for this study included the making of contacts with former administrators and teacher educators who were identified with early instructional programs in agricultural education. Very few persons with such experience prior to passage of the Smith-Hughes Act in 1917, are now available. However, some of the early leaders in the federally-aided program are quite knowledgeable regarding local and state programs which existed prior to 1917. A limited number of persons in this category were contacted during the course of the study. Attempts were made to obtain reactions from these men as to strengths and weaknesses of the previous programs and the influence of such on subsequent developments.

Abbreviated notations are included herewith of interviews with representative persons. Other than relation of the interviews to Chapter 7, "Conclusions and Implications," no attempt is made to show concensus of the interview reports.

G. A. Schmidt, Professor Emeritus, Colorado State University

Instructor, Whitewater Wisconsin State Teachers College
1912-1919

Head, Department Agricultural Education, Colorado State University, 1919-1944

(Notations based on interview - April 12, 1968)

1. Thinks program of vocational agriculture with supervised practice, as developed with the passage of the Smith-Hughes Act, was sound.

2. Believes inhibiting factors have been:

    a. Overemphasis in high school curricula of preparation for college.

    b. Lack of support in early years by administrators of secondary schools.

c. Relegation of disinterested students to departments of vocational agriculture.

3. Thinks vocational agriculture should be open to all interested boys, regardless of home background, and should be made more exploratory.

4. Is of opinion that standards for admission to teacher education have been too restrictive.

Carsie Hammonds, Professor Emeritus, University of Kentucky

Teacher, rural elementary school, 1913-1914

Principal of small high school (Academy) 1915-1916

Instructor vocational agriculture 1919-1924

University of Kentucky 1924-1964

Head, Vocational Education 1946-1964

(Notations based on taped interview, April 22, 1968)

1. The case made in the beginning for the teaching of agriculture was related directly to food production.

2. The early instructional programs in agriculture tended to be quite "bookish".

3. There is a fallacy in the learning by doing concept in that the learning can be good or bad. The learning experience should be based on science and consist of "right doings".

4. Vocational agriculture has become quite complex. The teacher must know what he presumes to teach. This calls for some degree of specialization, but not necessarily at the sacrifice of relatedness in the carrying forward of the total program.

Walter Newman, President Emeritus, Virginia Polytechnic Institute, 1947-1962

Instructor Vocational Agriculture, 1919-1922

Member teacher education staff, Virginia Polytechnic Institute, 1922-1925

State supervisor agricultural education, 1925-1942

Assistant state superintendent of public instruction 1942-1946

Vice President Virginia Polytechnic Institute, 1946-1947

(Notations based on taped interview April 23, 1968)

1. Guidelines for the use of teachers were lacking when agriculture was introduced in secondary schools. There was a tendency to offer a condensed version of courses taken in college.

2. The need for educating people in farming became apparent as the industrial revolution developed.

3. The state agricultural experiment stations have been responsible for much of the subject matter essential for the teaching of agriculture.

4. Instructional methods of early teachers were obtained largely through in-service training, consisting of conferences, workshops, and summer-session courses.

5. The close cooperation of personnel in the state office, at the university, and in the public schools made possible the on-going program of vocational agriculture in Virginia.

Harry Sanders, Professor Emeritus and Former Chairman Vocational Education, Virginia Polytechnic Institute

Instructor vocational agriculture in school previously designated as one of eleven Congressional District Schools in Virginia, 1917-1924

District supervisor of vocational agriculture, 1924-1925

Member teacher education staff Virginia Polytechnic Institute, 1925-1962

Head of Vocational Education, 1940-1962

(Notations based on taped interview, April 23, 1968)

1. The idea of vocational education was not new in 1917, but it was new from the standpoing of the public schools.

2. It was unfair in the beginning to ask instructors to teach in a field for which they had no professional preparation.

3. The supervised practice method of teaching, adapted from the apprenticeship system, tended to make the teaching of agriculture vocational.

4. The regional agent for agricultural education at Washington worked closely with me in developing job-analysis techniques in teaching, an approach which has been characteristic of the state program.

5. The experience in teaching adult classes was most rewarding.

6. The transition from the early "trial and error" project method to practical occupational experience has been a major development in the program.

7. Evaluation of training can no longer be based solely on establishment of trainees in farming.

H. M. Hamlin, Consultant, Center for Occupational Education
North Carolina State University

High school enrollee in Minnesota under provision of Putnam Act.

Teacher of agriculture in Minnesota, 1916-1918

Member teacher education staff, Iowa State University, 1920-1938

Member teacher education staff, University of Illinois, 1938-1962 (Head—Department of Agricultural Education 1942-1962

(Notations based on taped interview July 11, 1968)

Experience with State-aided Program in Minnesota

1. Both boys and girls were enrolled.
2. There was no emphasis on supervised farming.
3. The teachers did considerable extension work with farmers.
4. Opportunities to involve agricultural industries in the program were ignored.

Strengths of Early Programs of Vocational Agriculture

1. There was a favorable rationale for the program, in that offerings had been developed previously in approximately thirty states.
2. There had been experimentation with other types of schools, including county schools of agriculture, congressional district schools, and state schools of agriculture.
3. In addition to schools in the rural areas, a number of cities provided for vocational instruction in agriculture.

Weaknesses of Early Programs of Vocational Agriculture

1. Standards established with application of federal aid eliminated some features of programs previously established within states.
2. The program was confined to farm people.
3. Instruction in agriculture was somewhat isolated from other phases of vocational and general education.

Reactions to More Recent Developments

1. The states generally have not provided any agricultural education that was not federally aided. However, administration of the federal program has been quite flexible.

2. We have learned much from our experiences about local, state and federal relations in education.

3. The development of community colleges and technical institutes in recent years has offered possibilities for post high-school instruction in agriculture, beyond that included in the offerings of area vocational schools.

4. The program of teacher education in agriculture has been outstanding.

E. R. Alexander, Professor Emeritus, Texas A & M University

Background in teaching and administration in public schools

Instructor of vocational agriculture two years

Texas A & M University, 1919-1953

Head, Department Agriculture Education 1935-1953

Spent 4½ months in New Ghanda studying advisibility of establishing foreign-aid program in agriculture.

(Notations based on taped interview August 7, 1968)

1. The early program demonstrated the significance of systematic instruction for youth and adults.

2. The major strengths of vocational education in agriculture have been that of leadership training of FFA members and the rather unique program of instruction for adults.

3. Credit for progress of vocational education in

agriculture in Texas is due to cooperation of the state department of education, which has given support to the program and has placed responsibilities for its development on the state supervisory and teacher education staffs.

Henry Ross, Professor Emeritus, Texas A & M University

Studied general agriculture in elementary grades.

Received secondary education in two-year terminal program at Texas A & M University.

Taught vocational agriculture, 1923-35; last two years in student teaching center at Bryan.

Became member of teacher education staff in 1935.

Took leave in 1957. Spent 4½ years in East Pakistan as an advisor to establishment of an agricultural college.

Has had advisory responsibilities in Formosa and the Dominican Republic.

(Notations based on taped interview August 7, 1968)

1. Participation in club activities was the most practical part of personal experience with agriculture in elementary schools.

2. Early concept implied that less able students should be relegated to vocational courses.

3. The early program tended to hold in school those who might otherwise have been drop-outs.

4. Activities of civic organizations such as the Chambers of Commerce made vital contributions to development of early programs in public schools.

5. Training in leadership has been a strong feature of vocational agriculture. Following its organization in 1928 the FFA has contributed a great

deal to this end.

W. D. Parsons, Professor Emeritus, West Virginia University

Background as teacher of science and mathematics, and in administration of junior and senior high schools, 1905-1915.

County Agricultural Agent, 1918-1920.

Instructor of vocational agriculture, 1920-1923.

Member of university staff in agricultural education, 1923-1957 (with alternating assignments as acting state supervisor in the beginning).

Chairman of department, 1936-1951.

(Notations based on interview November 11, 1968)

Weaknesses of Early Program of Vocational Agriculture

1. Lack of teacher time due to split assignments of vocational and non-vocational subjects.

2. Lack of travel money for adequate supervision of farming projects.

3. Lack of acceptance of program by "general" educators.

4. Feeling at University that program of vocational agriculture should not include any instruction of adults.

Implications for Present Program

1. There should be more cooperation with industry in providing occupational experience.

2. The tendency to allocate responsibility to the states makes for a void in administration and supervision at the federal level.

3. The multiplicity of federally-aided programs affecting education makes for confusion and some duplication of effort.

CHAPTER VII
CONCLUSIONS AND IMPLICATIONS

The conclusions and implications presented herewith are mainly in the form of generalizations. The major intent of the study was to document, insofar as possible within prescribed limitations, historical needs in agriculture and the role of secondary education in response to the needs. No hypotheses were included among the planned procedures.

The conclusions represent deductions derived from a review of historical materials, and through contacts with agencies and individuals in position to supply historical information. A record of the findings are included in Chapters II-VI and in the section entitled Summary of the Report.

It was not within the intent of the study to make recommendations pertaining to current programs of vocational education in agriculture. However, programs conducted prior to passage of the Vocational Education Act in 1917 appear to have had influence on subsequent programs. Some such deductions are listed as Implications.

Conclusions

1. The European culture had a marked influence on early education in America.

   Settlers with rural backgrounds predominated in the colonies. Vocational education was practiced when the Indians taught the Americans how to grow corn. Except for the learned professions, apprenticeships constituted the major form of training.

2. Early educational developments provided a background for the establishment of educational institutions in agriculture.

   Lyceums are said to have provided experiences leading to extension teaching.

   Manual labor schools espoused the principle of applied practice.

   Institutes were organized in response to the need for technical training.

3. Early agricultural developments served as a backdrop for formal education in agriculture.

   A number of agricultural organizations and agencies were established to serve the interests of rural people prior to passage of the Morrill Land Grant Act. These included agricultural societies, fairs, and publications.

4. The early land grant acts established the principle of federal aid for education.

   The precedent of land grants for support of education came with the passage of the Northwest Ordinances in 1885 and 1887.

   The Morrill Act of 1862 provided support for instruction in land grant colleges.

   The Smith-Hughes Act of 1917 appropriated funds in support of vocational education in public schools.

5. National emergencies contributed to the enactment of federal legislation for education.

   The Morrill Act, authorizing the establishment of state universities, was enacted during the height of the Civil War in 1862. Earlier in the year President Lincoln approved a bill establishing the United States Department of Agriculture.

   The Smith-Lever Act establishing the rural extension service was enacted at the outbreak of the war in Europe and the promotion of federal legislation for vocational education occured during expansion of the war.

6. Educational developments in rural areas of the South during the period of reconstruction following the Civil War, were most significant.

   Public schools were established.

Extension programs for Negroes were promoted through influence of the Hampton Institute in Virginia and the Tuskegee Institute in Alabama.

7. The Nelson Amendment of 1907 to the Second Morrill Act paved the way for the Smith-Hughes Act.

   The amendment authorized that limited funds might be used by land-grant colleges for the preparation of instructors for teaching the elements of agriculture. Although the authorization wasn't fully implemented, passage of the measure increased interest of the colleges in the training of teachers, which was characterized by support later for the Smith-Hughes Act of 1917.

8. The experiences with instructional programs in agriculture by states and by local communities contributed to acceptance of the principle of federal aid for vocational education.

   Instruction in agriculture in rural elementary schools was quite popular about 1900. County, congressional, district and other special schools of agriculture became prominent about the time public high schools were being organized. Several states, thereafter, enacted legislation providing for vocational instruction in trades, agriculture and homemaking—out of which federal aid for vocational education emerged.

9. National organizations and agencies exerted an active influence in promoting federal support for vocational education.

   Examples of support from the background of agriculture would include the Report of the Country Life Commission and recommendations of farm organizations such as the National Grange and the Farmers Cooperative Union.

10. Separate legislation for agricultural extension and for vocational education made for some overlapping of educational services in agriculture.

    Several of the bills placed before the Congress prior to the Smith-Lever Act of 1914 and the Smith-Hughes Act of 1917 would have provided joint sponsorship in agricultural extension and in vocational education. The overlappings have been largely with organized youth groups, and in adult education. Whether combined legislation would have been preferable is a matter of conjecture.

11. The original function of the land-grant colleges was that of teaching.

From the standpoint of their services to agriculture and rural people the public universities and the colleges of agriculture struggled for a number of years to overcome the classical approach to high education. The Morrill laws provided funds for resident teaching only.

Authorization for research and for extension in the land-grant colleges was provided by latter legislation. Teaching, thereafter, continued to be a major function.

12. The preparation of teachers of agriculture constitutes a major responsibility of colleges of agriculture.

The early development of instructional programs in agriculture in public schools was closely related to the ability to colleges to train teachers.

Colleges of agriculture are responsible in large measure for the technical subject matter needed by teachers of agriculture. Precedent for federal support of the function came with passage of the Nelson Amendment to the Morrill Acts. Training teachers of agriculture became a major function of the colleges of agriculture with passage of the Smith-Hughes Act. Responsibility for methods of teaching is shared with colleges of education.

13. Concepts with respect to curricula for vocational education have adjusted with training needs.

The early curricula in vocational education were looked upon as training in simple skills for young people with limited intellectual ability. Training requirements became more complex as technology increased.

14. The lack of subject matter constituted a definite handicap in the early teaching of agriculture in public schools.

    The Hatch Experiment Station Act of 1887 was an important piece of legislation as related to vocational education in that it provided the means for conducting research on which subject matter in agriculture might be based.

15. Experiences with the teaching of agriculture in elementary and secondary schools about 1900 provided the basis for curriculum developments in the evolving program of vocational education in agriculture.

    The teaching of agriculture in elementary schools went through a transition of applied nature study, school gardens, and agricultural clubs. Applied instruction in agriculture became increasingly popular in secondary education as high schools were established in rural areas.

16. The felt needs of the public for vocational training was in advance of the institutional readiness to provide the necessary training.

    Colleges had not trained teachers in this area of education, and the public schools were not in position to present offerings in vocational education.

17. The lack of qualified teachers was a major handicap in the introduction of agriculture in public schools.

    A few universities established departments of agricultural education prior to enactment of the Smith-Hughes Act. Most teachers, however, were graduates of normal schools without special training in agricultural subject matter, or graduates of agricultural colleges without training in methods of teaching.

18. The early teachers of agriculture lacked professional

preparation for their jobs.

Programs of in-service training consisting of conferences, workshops, and summer sessions did much to alleviate the situation.

19. The introduction of agricultural subjects in secondary schools led to a demand for teacher training in agricultural education.

The years from 1900 to 1917 constituted a period of rapid expansion in public education. Legislation requiring the teaching of agriculture in rural elementary and secondary schools was enacted in several states. The United States Department of Agriculture issued publications on teacher education. A number of Universities offered in-service training programs in agricultural education. In recognition of such developments the federal legislation of 1917 carried provisions for the training of teachers of vocational subjects.

20. Colleges of agriculture cannot be responsible for the training of all needed personnel in the technical and professional fields of agriculture.

Enrollments in agriculture were comparatively small for many years following passage of the Morrill Act. The demands for personnel in farming and teaching increase markedly from 1900 to 1910. Further demands following World War II continued to increase with technological developments in agriculture.

Enrollments in non-degree programs in colleges of agriculture have been quite limited. Enrollments for basic training in agriculture has been provided in secondary schools for substantial numbers of persons. Currently, training programs in agriculture are being established in area vocational schools, in joint high school-technical institutes and in terminal curricula of community colleges. Private industry in agriculture is responsible for much on-job training.

Enrollments in degree programs in colleges of agriculture will likely continue to increase, as will the demand for graduates.

21. There was little standardization for early instructional programs of agricultural education in public schools.

No sharp distinction existed between offerings at upper elementary and lower secondary levels, and between offerings at secondary and college levels. The situation can be attributed to a lack of research and experimentation regarding suitability of offerings and to lack of authorization to educational agencies for establishment of standards.

22. The lack of guidelines handicapped administrators and teachers as agriculture was introduced in secondary schools.

Although the situation made for a lack of uniformity in offerings, it did permit exploration of program proposals at local and state levels.

23. The early developments of local and state programs of vocational education as separate entities tended to make for a dual system of education.

The subsequent precedent for federal support for vocational education necessitated a degree of direct administration and supervision of state programs. The tendency appears to have lessened more recently with federal support for all forms of education, and with recognition of the role of education in providing occupational training for the growing population and the expanding economy.

24. The early instructional programs in agriculture at all levels tended to be quite academic.

The science of agriculture had not been developed to any extent. Reference materials were lacking. Personnel who taught the subject in public schools were products of normal training departments. Instruction in colleges of agriculture developed slowly for many years following passage of the Morrill Act in 1862.

25. The project method of teaching is well adapted to the

teaching of agriculture in secondary schools.

The method can be traced to the nature study movement in public schools and to provisions for application of instruction in special schools. Supervised farm practice was recommended in Massachusetts and in a few other states, as the basic method of teaching, prior to 1917.

26. Experience with instructional programs in agriculture prior to 1917 was confined to farming.

The demand in agriculture was largely for the production of foodstuffs. Orderly processing and marketing had not been developed. Business was not construed to be part of agriculture. Sections of the Smith-Hughes Act applicable to agriculture were confined to instruction in farming.

27. Many of the practices initiated in state and local programs in agriculture, prior to passage of the Smith-Hughes Act, were occupationally oriented.

Club work dealing with the production of crops and livestock was associated with the early teaching of agriculture in public elementary and secondary schools. The facilities for special schools of agriculture ordinarily included farms. State-aided programs in public secondary schools, prior to federal aid, placed stress on supervised production projects.

28. The content of local programs of instruction in agriculture tended to become more vocational with the development of the home project plan of teaching.

The manual labor schools, organized during the forepart of the 19th Century, were designed to provide educational experiences on farms and in workshops. A second purpose was to make the institutions and students partially self-supporting. All too often the latter feature took precedence and the institutions failed to survive.

The experiences of the special schools of agriculture, organized several decades later, were quite varied and somewhat in proportion to the use of land facilities for educational purposes. Most of the surviving schools met requirements for federal aid with passage of the Smith-Hughes Act. Several of the state schools of agriculture are now operating at the post-secondary level or as two-year terminal-credit institutions.

29. The bond between federal, state and local agencies in agricultural education makes for coordination of effort.

In the absence of national guidelines the program of vocational education in agriculture, established prior to passage of the Smith-Hughes Act in 1917, varied considerably. The Act specified groups to be served, and provided for administrative and supervisory services—features which make for coordination of effort.

30. The role of the land-grant colleges encourages cooperative effort in education and agriculture within the states.

Federal enactments charge land-grant institutions with responsibilities for teaching, research, and extension. Colleges of agriculture offer degree programs in the professional and technical phases of agriculture. Research serves as the basis for dissemination of subject matter used by farmers, technicians and professional workers in agriculture and related fields.

Implications

1. There should be recognition of the expanding role of vocational education in agriculture.

Agriculture is now more than farming. It includes the processing, marketing and distribution of farm products. Subjects such as floriculture, landscaping and forced vegetable production are taught in urban areas. Cooperative experience is essential in training for non-farming industries in agriculture. The role also has international aspects.

2. Much of the training in vocational education in agriculture in the future should be given at post-secondary

levels.

Training in the beginning was confined to basic skills. Current technological developments in production agriculture and in the business of agriculture call for types of technical training and managerial ability which can best be obtained in vocational-technical institutes, two-year colleges and degree granting institutions. Furthermore, labor regulations exclude cooperative occupational experience for high school youth in hazardous phases of agriculture.

3. There should be more coordination of vocational programs with other phases of education.

   The tendency to establish local and state programs as separate entities, while vocational education was being introduced, had rather serious implications. In a few states provisions were made for separate state and local boards to administer training programs. The precedent of federal support for this form of education necessitated a degree of direct administration and supervision, other than through normal channels of education.

4. There should be a close tie of vocational agriculture with other vocational services, particularly as related to cooperative training.

   Certain of the training aspects in vocational education are more or less common to the different services. Training programs in agriculture now call for occupational experience in agricultural industry, along with experience in farming or production agriculture. The basic concepts for cooperative training in agriculture are similar to those developed for any of the vocational services. A lack of coordination in this phase of training programs would make for duplication of effort.

5. Close working relations with agricultural industry should be maintained due to advances in technology.

   Schools are unable to provide staff and training facilities comparable to that maintained in industry. Much of the training in the future, including cooperative work experience will be conducted outside of the schools. Conversely, industry will continue to be dependent on schools for pre-service training of prospective employees and for types of in-service training which can best be provided by the schools.

6. The preparation of teachers should constitute one of the major functions of colleges of agriculture.

   Placements in vocational agriculture and in other teaching positions, will continue to involve substantial numbers of the graduates. Also, some colleges of agriculture will have responsibilities for training teachers of home economics in cooperation with other departments.

   The teachers of agriculture will look to the colleges for subject matter information and for participation in in-service training.

7. Capable persons should be recruited for training as prospective teachers of vocational agriculture.

   The program of vocational education in agriculture becomes more complex as technology increases. Considerable emphasis is contained in secondary education courses dealing with production agriculture. The teaching of adult education classes and of post-high school groups requires considerable specialization and technical knowledge.

8. The History of Agricultural Education of Less Than College Grade in the United States, compiled by R. W. Stimson and F. W. Lathrop, should be updated.

   Data for the Stimson-Lathrop publication issued in 1942, were compiled in 1939 and 1940. The report is the principal source of information regarding previous agricultural offerings in public elementary and secondary schools. Programs conducted subsequently have been extensive. Currently marked changes are being made due to revisions in federal legislation. This should be made a matter of record.

APPENDICES

APPENDIX A - CHRONOLOGY

APPENDIX B - BIBLIOGRAPHY

APPENDIX C - RELATED READINGS

APPENDIX A
CHRONOLOGY

Background of Agricultural Education in the United States Prior to 1917

1609. Indians taught farmers at Jamestown how to grow corn.

1621. Pilgrims at Plymouth learned to grow corn from the Indian, Squanto.

1642. The Massachusetts Bay Colony enacted an apprenticeship plan.

1671. New Plymouth officials required apprenticeship training.

1694. New York City required that apprentices be registered.

1733. A public experimental garden was established at Savannah, Georgia.

1743. The American Philosophical Society, the earliest to promote scientific agriculture, was organized.

1785. The University of Georgia was incorporated (the first state-supported university).

The Philadelphia Society for Promoting Agriculture was established.

The South Carolina Society for Promoting and Improving Agriculture and Other Rural Concerns was organized.

May 20, The Ordinance of 1785 established the plan for disposing of western land.

1787. July 13, The Ordinance of 1787 established a system for government of western land.

1791. The New York Society for the Promotion of Agriculture, Arts and Manufactures was organized.

1792. The Massachusetts Society for Promoting Agriculture was organized.

1794. The Society for Promoting Agriculture in the State of Connecticut was organized.

1804. The first modern agricultural fair was held in Washington, D. C.

1810. The *Agricultural Museum*, first farm periodical, began publication.

1811. The Berkshire Agricultural Society, which sponsored fairs for local farmers, was formed under the presidency of Elkanah Watson.

1819. *The American Farmer*, which served largely as a model for agricultural papers, began publication.

1820. The Mechanics Institute was established in New York City.

1823. The Gardiner Lyceum School was organized at Gardiner, Maine.

1824. The Franklin Institute was established in Philadelphia.

The Rensselaer School was established at Troy, New York (renamed Rensselaer Polytechnic School in 1950).

1826. Josiah Holbrook organized Branch No. 1 of the American Lyceum at Mellbury, Massachusetts.

1836. The Patent Office, which later took on agricultural functions, was created in the State Department.

1837. A state university providing general and agricultural education was established as an integral part of the public school system in Michigan.

1849. Jonathan Turner of Illinois began to campaign for "industrial universities".

1851. An Act of the Territorial Legislature in Minnesota provided for establishment of a state university (reorganized by legislative enactment as the University of Minnesota in 1858).

1852. The United States Agricultural Society was organized.

1855. Michigan passed legislation providing for the establishment of the Michigan Agricultural College as a separate institution.

Legislation was enacted for the establishment of the Farmers' High School in Pennsylvania, later to become Pennsylvania State College.

1856. The Maryland Agricultural College was chartered by the legislature.

1857. The first Morrill bill was introduced in Congress.

1858. A state college in Iowa was chartered under the title of State College and Farm.

1862. May 15. The Department of Agriculture was established.

May 20. The Homestead Act was approved by President Lincoln.

July 2. President Lincoln signed the Land-Grant College Act.

September 11. Iowa was the first state to accept provisions of the Morrill Act.

1868. The U. S. Office of Education was established.

The Patrons of Husbandry, later known as the National Grange, was organized.

1873. The National Grange advocated that practical agriculture and domestic science be taught in rural schools.

1874. The first Chautaugua was formed.

1875. The first State Agricultural Experiment Station was established at Middletown, Connecticut.

1880. The National Farmers Alliance or Northern Alliance was organized.

1881. The Storrs Agricultural School in Connecticut was chartered and opened for instruction.

1887. The Association of American Agricultural Colleges and Experiment Stations was organized.

March 2. The Hatch Experiment Station Act was approved.

1888. The School of Agriculture of the University of Minnesota was established by action of the Board of Regents.

1889. The Department of Agriculture was raised to cabinet status.

Congressional District Agricultural Schools were initiated in Alabama.

1896. The rural free delivery system for handling mail was started.

1900. Special work for farm youth was organized in Macoupin County, Illinois.

1902. The Farmers Union (Farmers Educational and Cooperative Union of America) was organized.

The Association of Agricultural Colleges and Experiment Stations recommended that the teaching of agriculture be introduced into the public schools, and also in special agricultural schools.

1903. Seman A. Knapp directed a privately financed community demonstration on the Walter Porter farm near Tyler, Texas.

The National Education Association suggested that the larger, consolidated rural schools should teach nature study, elementary agriculture and handwork; and that agricultural colleges should prepare teaching materials for use in elementary and secondary schools.

1905. The Douglas Commission on Industrial Education was appointed by the Governor of Massachusetts.

1906. Iowa State College initiated Agricultural Extension Work.

The Massachusetts State Commission on Vocational Education was established.

Massachusetts established a state system of public education.

The National Society for Promotion of Industrial Education was organized in New York City.

1907. The Association of Agricultural Colleges and Experiment Stations published a syllabus for agriculture.

1908. President Theodore Roosevelt organized The Country Life Commission.

A Department of Rural and Agricultural Education was organized in the National Education Association.

The school and home farm plan for teaching agriculture was initiated by Rufus Stimson at Smith's Agriculture School in Massachusetts.

1909. The Putnam Act in Minnesota appropriated funds for establishment and maintenance of departments of agriculture, manual training, and domestic economy in ten state high schools.

Dean Davenport at the University of Illinois expressed support for vocational education in agriculture at the annual meeting of the Association of Agricultural Colleges and Experiment Stations.

1910. A system of state-aided vocational schools was established in New York.

1911. The American Association for the Advancement of Agricultural Teaching was organized.

The first Farm Bureau was formed in Broome County, New York.

1913. The Indiana Vocational Education Act provided for vocational education in trades and industries, agriculture and domestic sciences.

1914. The Commission on National Aid for Vocational Education was created by an act of Congress.

May 8. The Smith-Lever Act was passed, providing for establishment of Cooperative Agriculture Extension Work.

1917. February 23. The Smith-Hughes Vocational Education Act was passed.

APPENDIX B
BIBLIOGRAPHY

A. BOOKS

Bailey, L. H. Cyclopedia of American Agriculture, Volume IV, Farm and Community. New York: The Macmillan Company, 1911. 650 p.

Barlow, Melvin L. History of Industrial Education in the United States. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1967. 512 p.

Benedict, Murray R. Farm Policies of the United States. New York: The Twentieth Century Fund, 1953. 548 p.

Bond, Horace Mann. The Education of the Negro in the American Social Order. New York: Prentice-Hall Inc., 1934. 501 p.

Bricker, Garland A. Agricultural Education for Teachers. Chicago: American Book Company, 1914. 172 p.

Cardozier, V. R. (ed.). Teacher Education in Agriculture. A Project of the American Association of Teacher Educators in Agriculture. Danville, Illinois: The Interstate Printers and Publishers Inc., 1967. 375 p.

Davidson, J. Brownlee, Herbert M. Hamlin, and Paul C. Taff. A Study of the Extension Service in Agriculture and Home Economics in Iowa. Ames: Collegiate Press, Inc., 1933. 237 p.

Eddy, Edward D. Colleges for Our Land and Time. New York: Harper and Brothers, 1957. 328 p.

Hamlin, Herbert M. Agricultural Education in Community Schools. Danville, Illinois: The Interstate Printers and Publishers, 1949. 488 p.

Hamlin, Herbert M. The Public and Its Education. Danville, Illinois: The Interstate Printers and Publishers, 1955. 299 p.

Hawkins, Layton S., Charles A. Prosser, and John C. Wright. *Development of Vocational Education*. Chicago: American Technical Society, 1951. 656 p.

Hill, D. S. *Introduction to Vocational Education*. New York: The Macmillan Company, 1923. 483 p.

Mays, Arthur B. *An Introduction to Vocational Education*. New York: The Century Co., 1930. 323 p.

Rasmussen, Wayne David (ed.). *Readings in the History of American Agriculture*. Urbana, Illinois: University of Illinois Press, 1960. 340 p.

Roberts, Roy W. *Vocational and Practical Arts Education*. New York: Harper and Row Publishers, Second Edition, 1965. 596 p.

Wheeler, John T. *Two Hundred Years of Agricultural Education in Georgia*. Danville, Illinois: The Interstate Printers and Publishers, 1948. 397 p.

B. PUBLICATIONS OF THE GOVERNMENT AND OTHER ORGANIZATIONS

Barrows, H. P. *Development of Agricultural Instruction in Secondary Schools*. Department of Interior, Bureau of Education, Bulletin, 1919, No. 85. Washington: Government Printing Office, 1920. 108 p.

Blaugh, Lloyd E. *Federal Cooperation in Agricultural Extension Work, Vocational Education, and Vocational Rehabilitation*. Department of Interior, Office of Education, Bulletin, 1933, No. 15. Washington: Government Printing Office, 1935. 297 p.

Boss, Andrew, and Others. *The Early History and Background of the School of Agriculture at the University Farm, St. Paul*. University of Minnesota, St. Paul, 1941. 94 p.

Commission on National Aid for Vocational Education, Volume I. *Report of the Commission*. 207 p. Volume II. *Hearings Before the Commission*. 292 p. 63rd Congress, 2nd Session, House of Representatives, Document No. 1004.

Washington: Government Printing Office, 1914.

Crosby, Dick J. "Boys Agricultural Clubs." Yearbook of the United States Department of Agriculture, 1904. p. 489-496. Washington: Government Printing Office, 1905.

Crosby, Dick J. "Training Courses for Teachers of Agriculture." Yearbook of the United States Department of Agriculture, 1907. p. 207-222. Washington: Government Printing Office, 1908.

Everett, E. Edwards. "American Agriculture - The First 300 Years." Yearbook of the Department of Agriculture, 1940. p. 171-276. Washington: Government Printing Office.

Humphreys, L. R. The Early Development of Vocational Education in Agriculture in Utah. Salt Lake City: Utah State Department of Public Instruction, 1965. 276 p.

Jewell, James R. Agricultural Education Including Nature Study and Small Gardens. Department of the Interior, Bureau of Education, Bulletin, 1907, No. 2. Washington: Government Printing Office, 1907. 140 p.

John, Walton C. Hampton Normal and Agricultural Institute. Department of the Interior, Bureau of Education, Bulletin, 1923, No. 27. Washington: Government Printing Office, 1923. 117 p.

Land Grant Centennial Fact Book. American Association of Land Grant Colleges and State Universities, 1785 Massachusetts Avenue, N. W., Washington, D. C.: 1962. 38 p.

Massachusetts Commission on Industrial and Technical Education. Report of the Commission. Boston: Wright and Potter Printing Company, 1906. 196 p.

Missouri Department of Public Instruction, Jefferson City. Reports of the Public Schools of the State of Missouri. Ending June 30, 1905 - 1910 Inclusive.

Monahan, A. C. and C. H. Dye. Institutions in the United States Giving Instruction in Agriculture, 1915-1916. Department of Interior, Bureau of Education, Bulletin, 1917, No. 34. Washington: Government Printing Office, 1917. 115 p.

Mumford, Frederick B. *The Land Grant College Movement*. Missouri Agricultural Experiment Station, Bulletin 419. Columbia: University of Missouri, July 1940. 140 p.

Nolan, A. W. and C. A. Bell. *A History of Agricultural Education of Less Than College Grade in Illinois*. Bulletin 80. Springfield: Illinois Board for Vocational Education, 1940. 30 p.

Peterson, Verd. *History of the Program of Vocational Agricultural Education in the Public Schools of South Carolina 1917-1958*. Columbia: State Department of Education. 45 p.

Progress of Public Education in the United States of America. Report of the 31st International Conference on Public Education. Department of Health, Education and Welfare, Office of Education, OE-10005-68A. Washington: Government Printing Office, 1968. 50 p.

Robison, C. H. and Jenks, F. B. *Agricultural Instruction in High Schools*. Bureau of Education, Bulletin, 1913, No. 6. Washington: Government Printing Office, 1913. 80 p.

Roberts, Roy W. *Historical Development of Vocational Agricultural Education in Arkansas Public Schools*. University of Arkansas Bulletin, 35, No. 2, April 15, 1941. 38 p.

Sasman, L. M. *The Development of Vocational Agricultural Education in Wisconsin*. Agricultural Series, Bulletin No. 4. Madison: State Board of Vocational Education, (undated publication). 87 p.

Smith, Z. M. *Some Historical Data on Vocational Agriculture Education in Indiana from 1913 to 1931*. Bulletin 109. Indianapolis: State Department of Public Instruction, 1931. 84 p.

Stimson, Rufus W. and Frank W. Lathrop. *History of Agricultural Education of Less Than College Grade in the United States*. Federal Security Agency, Office of Education, Vocational Division Bulletin No. 217, Agricultural

Series No. 55. Washington: Government Printing Office, 1942. 648 p.

Swanson, Gordon I. (ed.). *Vocational Education for Rural America*. *Yearbook, 1958-59.* Department of Rural Education, National Education Association. Washington: 1959. 354 p.

True, Alfred Charles. *A History of Agricultural Education in the United States, 1785-1925*. Department of Agriculture, Miscellaneous Publication No. 36. Washington: Government Printing Office, 1929. 436 p.

True, Alfred Charles. *A History of Agricultural Experimentation and Research in the United States, 1907-1925*. Department of Agriculture, Miscellaneous Publication No. 251. Washington: Government Printing Office, 1937. 321 p.

True, Alfred Charles. *A History of Agricultural Extension Work in the United States, 1785-1923*. Department of Agriculture, Miscellaneous Publication No. 15. Washington: Government Printing Office, 1928. 220 p.

U. S. Country Life Commission. *Report of the Commission on Country Life With an Introduction by Theodore Roosevelt*. New York: Sturgis and Walton Company, 1911. 150 p.

U. S. Department of Agriculture, *After A Hundred Years*, *The Yearbook of Agriculture 1962*. Washington: Government Printing Office, 1962. 688 p.

U. S. Department of Agriculture, *Farmers in a Changing World*, *Yearbook of Agriculture*, *1940.* Washington: Government Printing Office, 1940. 1215 p.

U. S. Department of Agriculture, *Yearbook of the United States Department of Agriculture*, *1904*. Washington: Government Printing Office, 1905. 776 p.

U. S. Department of Agriculture, *Yearbook of the United States Department of Agriculture*, *1907*. Washington: Government Printing Office, 1908. 798 p.

U. S. Department of Interior, *Survey of Land-Grant Colleges and Universities*, *Volume I* (directed by Arthur J. Klein). Office of Education, Bulletin, 1930, No. 9. Washington: Government Printing Office. 998 p.

U. S. Office of Education, *Education for a Changing World of Work*. Report of the Panel of Consultants on Vocational Education. Department of Health, Education, and Welfare, OE-80021. Washington: Government Printing Office, 1963. 296 p.

U. S. Office of Education, Centennial Information Committee, LeRoy V. Goodman, Chairman. *Highlighting the Progress of American Education*. Washington: Governmental Printing Office, 1967. (Brochure)

Venn, Grant. *Man*, *Education and Work*, *Post Secondary Vocational and Technical Education*. American Council on Education. 1985 Massachusetts Avenue, N. W., Washington: 1964. 184 p.

Works, George A. and Barton Morgan. *The Land-Grant Colleges*. Staff Study No. 10, Prepared for the Advisory Committee on Education. Washington: Government Printing Office, 1939. 141 p.

C. PERIODICALS

Ellsworth, Lucius F. "The Philadelphia Society for the Promotion of Agriculture and Agricultural Reform," *Agricultural History*, 42: 189-197, July, 1968.

Hamlin, H. M. "Fifty Years of Progress in Agricultural Education," *American Vocational Journal*, 31:39-46, 105, December, 1956.

Mays, Arthur B. "Fifty Years of Progress in Vocational and Practical Arts Education," American Vocational Journal, 21:29-38, December, 1936.

Rasmussen, Wayne. "The Civil War: A Catalyst of Agricultural Revolution," *Agricultural History*, 39:187-195, October, 1965.

Saloutos, Theodore. "Southern Agriculture and the Problems of Readjustment: 1866-1877," Agricultural History, 30:58-76, April, 1956.

Schmidt, Louis Bernard. "The Agricultural Revolution in the Prairies and the Great Plains of the United States," Agricultural History, 8:169-195, October, 1934.

D. UNPUBLISHED MATERIALS

Armstrong, L. O. "The Development of Agricultural Education in North Carolina." Unpublished Master's thesis, North Carolina State College, Raleigh, 1949. 488 p.

Bartel, Carl R. "Origin, Development and Work of the American Vocational Association." Unpublished Doctoral dissertation, University of Missouri, Columbia, 1959. 517 p.

Hausrath, Alfred H. "A History of High School Agriculture in Iowa." Ames: Iowa State College, 1940. 86 p. (Typed manuscript)

Mitchell, John H. "Development of Vocational Agricultural Education in Louisiana." Unpublished Doctoral dissertation, Louisiana State University, Baton Rouge, 1959. 445 p.

Sutherland, S. S. "Agricultural Education in the Secondary Schools of California." Davis: University of California, 1940. 13 p. (Mimeographed).

APPENDIX C
RELATED READINGS

A. BOOKS

Bailey, Joseph C. *Seaman A. Knapp Schoolmaster of American Agriculture*. New York: Columbia University Press, 1945. 307 p.

Bennett, Charles. *History of Manual and Industrial Education Up to 1870*. Peoria, Illinois: The Manual Arts Press, 1926. 461 p.

Campbell, Thomas Monroe. *The Movable School Goes to the Negro Farmer*. Tuskegee, Alabama: Tuskegee Institute Press, 1936. 170 p.

Cardozier, V. R. (ed.). *Teacher Education in Agriculture*. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1967. 375 p.

Carrier, Lyman. *The Beginnings of Agriculture in America*. New York: McGraw-Hill Book Company, Inc., 1923. 323 p.

Colman, Gould P. *Education and Agriculture, A History of the New York State College of Agriculture at Cornell University*. Ithaca: Cornell University, 1963. 603 p.

Davenport, Eugene. *Education for Efficiency*. Boston: D. C. Heath and Company, 1909. 184 p.

Keller, Franklin J. *Principles of Vocational Education*. Boston: D. C. Heath and Company, 1948. 402 p.

Lee, Edwin A. (ed.). *Objectives and Problems of Vocational Education*. New York: McGraw-Hill Book Company, Inc., 1938. 476 p.

Lord, Russell. *The Care of the Earth*. New York: Thomas Nelson and Sons, 1962. 480 p.

Monroe, Paul. *The Founding of the American Public School System*. New York: The Macmillan Company, 1940. 520 p.

Morgan, Barton. *A History of the Extension Service of Iowa State College*. Ames: Collegiate Press, Inc., 1934. 107 p.

Nolan, Aretas W. *The Teaching of Agriculture*. Chicago: Houghton Mifflin Company, 1918. 277 p.

Shepardson, Whitney H. *Agricultural Education in the United States*. New York: The Macmillan Company, 1929. 132 p.

Snedden, David. *The Problem of Vocational Education*. Chicago: Houghton Mifflin Company, 1910. 86 p.

Snedden, David. *Vocational Education*. New York: The Macmillan Company, 1920. 587 p.

Thrasher, Max Bennett. Tuskegee, *Its Story and Its Works*. Boston: Small, Maynard, and Company, 1900. 215 p.

B. PUBLICATIONS OF THE GOVERNMENT AND OTHER ORGANIZATIONS

Agricultural Education in Secondary Schools. Department of the Interior, Bureau of Education, Bulletin 1912, No. 6. Washington: Government Printing Office, 1912. 53 p.

Agricultural Instruction in Secondary Schools. Papers Read at the Third Annual Meeting of the American Association for the Advancement of Agricultural Teaching, Atlanta, Georgia, November 12, 1912. Bureau of Education, Bulletin, 1913, No. 14. Washington: Government Printing Office, 1913. 51 p.

Agricultural Teaching. Papers Presented at the Fourth Annual Meeting of the American Association for the Advancement of Agricultural Teaching. Bureau of Education, Bulletin, 1914, No. 27. Washington: Government Printing Office, 1914. 87 p.

Andrews, Benj. F. *The Land Grant of 1862 and the Land Grant Colleges*. Department of the Interior, Bureau of Education, Bulletin, 1918, No. 13. Washington: Government Printing Office, 1918. 63 p.

Bailey, Liberty Hyde. *On the Training of Persons to Teach Agriculture in the Public Schools*. Department of the Interior, Bureau of Education, Bulletin, 1908, No. 1 Washington: Government Printing Office, 1908. 53 p.

Barlow, Melvin L. (ed.). *Vocational Education. The Sixty-Fourth Yearbook of the National Society for the Study of Education. Part I*. Distributed by the University of Chicago Press, 1965. 301 p.

Bibliography of Education in Agriculture and Home Economics. Bureau of Education, Bulletin, 1912, No. 10. Washington: Government Printing Office, 1912. 62 p.

Brunner, Henry S. *Land-Grant Colleges and Universities 1862-1962*. Department of Health, Education, and Welfare, Office of Education, Bulletin, 1962, No. 13. Washington: Government Printing Office. 78 p.

Committee on Vocational Education of the National Education Association. *Vocational Secondary Education*. Department of Interior, Bureau of Education, Bulletin 1916, No. 21. Washington: Government Printing Office, 1916. 163 p.

Elliot, Edward C. and Charles A. Prosser. *Legislation Upon Industrial Education in the United States*. National Society for Promotion of Industrial Education, Bulletin, No. 12. New York: 20 West 44th St., 1910. 76 p.

Fairchild, G. T. "Evolution of Agricultural Education," *Proceedings, Eleventh Annual Convention of the Association of American Agricultural Colleges and Experiment Stations*. Department of Agriculture, Bulletin, No. 49, p. 32-38. Washington: Government Printing Office, 1898.

French, W. H. *Report of Agriculture in the High Schools of Michigan*. Michigan Agricultural College, Bulletin No. 16. East Lansing: 1916. 17 p.

Hatch, K. L. *The High School Course in Agriculture*. Bulletin of the University of Wisconsin, No. 441, High School Series No. 12, Madison: 1912. 40 p.

Howe, F. W. Boys' and Girls' Agriculture Clubs. Department of Agriculture, Farmers Bulletin 385. Washington: Government Printing Office, 1910. 23 p.

Indiana - A Pioneer State in Agricultural Education and 4-H Club Work. Purdue University, Department of Agricultural Extension, Special Bulletin, June, 1944. 36 p.

James, John A. Agricultural Education and Extension Teaching 1900-1954. Department of Agricultural Education, University of Wisconsin, 1954. 85 p.

John, Walton C. (ed.). Land-Grant College Education 1910 to 1920. Part I - History and Educational Objectives. Department of the Interior, Bureau of Education, Bulletin, 1924, No. 30. Washington: Government Printing Office, 1925. 51 p.

Kandel, I. L. Federal Aid for Vocational Education. A Report to the Carnegie Foundation for the Advancement of Teaching, Bulletin No. 10. New York: 576 Fifth Avenue, 1917. 127 p.

Knapp, H. B. and Others. The Record of Twenty Years, Vocational Agriculture in New York State, 1911-1931. Published by the Teachers of Agriculture in New York and presented at the Twentieth Meeting at the State Institute of Applied Agriculture. Farmingdale, New York: June 29-July 3, 1931. 79 p.

Lane, C. H. Agricultural Education 1916-1918. Department of Interior, Bureau of Education, Bulletin, 1918, No. 44. Washington: Government Printing Office, 1919. 40 p.

Lane, C. H. and D. J. Crosby. The District Agricultural Schools of Georgia. Department of Interior, Bureau of Education, Bulletin, 1916, No. 44. Washington: Government Printing Office, 1916. 32 p.

Massachusetts. Information Relating to the Establishment and Administration of County Agricultural Schools and Agricultural Departments. Commonwealth of Massachusetts, Bulletin of the Board of Education, 1916, No. 23. 80 p.

Massachusetts. *State-aided Vocational Agricultural Education in 1915*. The Commonwealth of Massachusetts, Bulletin of the Board of Education, 1916, No. 5. 19 p.

Michigan State Board of Control for Vocational Education. *First Came the Farms*. History of Vocational Agricultural Education in Michigan, Bulletin No. 289. Lansing: 1944. 75 p.

National Advisory Committee on Education. *Federal Relations to Education*. *Report of the Committee*. *Part II, Basic Facts*. Washington: Government Printing Office, 1931. 448 p.

Richardson, A. E. V. *Agricultural Education and Agricultural Development in America*. Victoria, Australia: Department of Agriculture, 1918. 135 p.

Robison, Clarence H. *Agricultural Instruction in the Public High Schools of the United States*. Contributions to Education, No. 39. New York: Teachers College, Columbia University, 1911. 205 p.

Russell, John Dale and Associates. *Vocational Education*. Staff Study No. 8. Prepared for the Advisory Committee on Education. Washington: Government Printing Office, 1938. 325 p.

Skidmore, H. M. *Teacher Training in Agriculture: Status, Development, And Methods in the Field of Teacher Training*. Federal Board for Vocational Education, Bulletin 94, Agriculture Series 20. Washington: Government Printing Office, 1924. 82 p.

Stimson, R. W. *The Massachusetts Home-Project Plan of Vocational Agricultural Education*. Bureau of Education, Bulletin, 1914, No. 8. Washington: Government Printing Office, 1914. 104 p.

Storm, Ashley V. *How the Land-Grant Colleges are Preparing Special Teachers of Agriculture*. Contributions to Education, No. 5. Nashville, Tennessee: George Peabody College for Teachers. 139 p. (undated publication).

Swanson, J. Chester (ed.). Development of Federal Legislation for Vocational Education. Prepared for the Panel of Consultants on Vocational Education, United States Department of Health, Education and Welfare. Chicago: American Technical Society, 1962. 110 p.

Training Teachers of Agriculture. Department of the Interior, Bureau of Education, Bulletin, 1919, No. 66. Washington: Government Printing Office, 1920. 44 p.

True, Alfred C. Institutions in the United States Giving Instruction in Agriculture. Circular No. 97, Department of Agriculture. Washington: Government Printing Office, 1910. 15 p.

True, Alfred C. "Introduction of Elementary Agriculture into Schools." Yearbook of the United States Department of Agriculture, 1906. p. 151-164. Washington: Government Printing Office, 1907.

U. S. Department of Agriculture. Century of Service, The First 100 Years of the Department, Centennial Committee. Washington: Government Printing Office, 1963. 560 p.

U. S. Department of Agriculture. State Agricultural Experiment Stations. Cooperative State Experiment Station Service, Miscellaneous Publication, 904. Washington: Government Printing Office, 1962. 262 p.

U. S. Office of Education. Vocational Education, The Bridge Between Man and His Work, Summary and Recommendations. Adapted from the General Report of the Advisory Council on Vocational Education. Department of Health, Education and Welfare, Office of Education, OE-80053. Washington: Government Printing Office, 1968. 16 p.

University of Missouri. Talks Presented on Seventy-Fifth Anniversary of the Hatch Act and the Missouri Agricultural Experiment Station. Columbia: October 10, 1963. 20 p.

Wilkerson, Doxey A. Special Problems of Negro Education. Staff Study No. 12. Prepared for the Advisory Committee on Education. Washington: Government Printing Office, 1939. 171 p.

Works, Monroe N. *Negro Yearbook and Annual Encyclopedia of the Negro*. Tuskegee, Alabama: Tuskegee Normal and Industrial Institute, 1912, 215 p.

Wright, J. C. *Forty Years in Vocational Education*. Address delivered at Annual Banquet of the American Vocational Association, Buffalo, New York, February 7, 1946. Washington: Federal Security Agency, Office of Education. 14 p.

C. PERIODICALS

Agricultural History. A Publication of the Agricultural History Society. Edited at the Agricultural History Center, University of California, Davis.

American Vocational Association. "Fifty Years of Progress in Vocational and Practical Arts Education." Special Issue, American Vocational Journal, Volume 31, December, 1946.

Davis, John W. "The Negro Land-Grant College," *Journal of Negro Education*, 2:312-328, July, 1933.

Ellsworth, Clayton S. "The Coming of Rural Consolidated Schools in the Ohio Valley, 1892-1912." *Agricultural History*, 30:119-129, 1956.

Flick, Hugh M. "Elkanah Watson's Activities on Behalf of Agriculture," *Agricultural History*, 21:193-198, October, 1947.

Fussell, G. E. "Social and Agrarian Background of the Pilgrim Fathers," *Agricultural History*, 7:183-202, October, 1933.

George, Walter F. (Senator). "Vocational Education - A Major Hope for the Victory of Freedom," *American Vocational Journal*, 31:5-6, December, 1956.

The History of Education Quarterly. Official Organ of the History of Education Society. Published in Cooperation with the University of Pittsburgh.

The Journal of Negro Education. Published quarterly by the Howard University Press, Washington, D. C.

Loehr, Rodney C. "The Influence of English Agriculture on American Agriculture, 1775-1825," *Agricultural History*, 11:3-15, January, 1937.

Tatler, Henry. "State and Federal Land Policies During the Confederation Period," *Agricultural History*, 9:176-186, October, 1935.

West, Earle H. "The Peabody Education Fund and Negro Education, 1867-1880," *History of Education Quarterly*, 6:3-21, Summer, 1966.

D. UNPUBLISHED MATERIALS

Bradford, H. E. "A Short History of Agricultural Education Below College Grade in Nebraska." University of Nebraska, Lincoln, 1940. 39 p. (Typed manuscript).

Clark, M. J. "An Analysis of the Development of Public School Agriculture for Negroes in Louisiana." Unpublished Master's thesis, Iowa State College, Ames, 1934. 119 p.

Clements, LeRoy D. "A History of Training Teachers of Vocational Agriculture in Nebraska." University of Nebraska, Lincoln, 1963. 39 p. (Typed manuscript).

Cotterman, H. G., P. R. Poffenberger, and A. M. Ahalt. "History of Agricultural Education in Maryland." University of Maryland, College Park, 1939 and 1940. 22 p. (A combined manuscript).

Green, Julian Clarence. "Development of Vocational Agricultural Education in Texas, 1917-1957." Unpublished Doctoral dissertation, Louisiana State University, Baton Route, 1958. 496 p.

Hamlin, Herbert M. "A Case Study of Teacher Training in a Separate Land-Grant College," Unpublished Doctoral dissertation, University of Chicago, 1931. 322 p.

Meaders, O. D. "Practices Advocated by National Agencies and Organizations for Implementing Local Programs of Vocational Agriculture, 1936-1954." Unpublished Doctoral dissertation, Michigan State University, East Lansing, 1957. 392 p.

Soretire, Elijah. "History of Vocational Education in Agriculture in Iowa," Unpublished Master's thesis, Iowa State University, Ames, 1968. 117 p.

Tenney, A. W. "Chronological Reference Keys in Vocational and Technical Education." Department of Health, Education, and Welfare, Office of Education, Division of Vocational and Technical Education. Washington: 1967. 27 p. (Mimeographed).